Product Name	Manufacturer	Section
PTFE Thread Seal Tape	Allied Rubber & Gasket Company, Inc. (ARGCO)	5
PU Gun & Foam Cleaner	Soudal N.V. Spec Seal Blue	5
Purple Pirmer Cleaner	Oatey Co.	5
Purple Primer	Mainline	5
Putty Tape	Black Swan Mfg. Co.	5
PVC All Weather Clear Cement	Oatey Co.	5
PVC Fitting Covers & Jacketing	Proto Corp.	5
PVC Pipe & Fittings	Charlotte Pipe & Foundry Company	5
PVC Regular Clear Cement	Oatey Co.	5
Redguard Waterproofing & Crack Prevention Membrane	Custom Building Products	5
Regular Clear Advanced PVC Cement	Oatey Co.	5
ROHPER + LSPR 6PK Gloss Black	Rust-Oleum Corporation	5
Rust Tough Enamel Gloss Black	Krylon Products Group	5
Silicone Rubber Sealant	Momentive Amer, Ind.	5
Silicone Sealant - Acetoxy Cure - Clear, White & Colors	Red Devil, Inc.	5
Silicone Window & Door Clear Caulk (100%)	DAP Productsm Inc.	5
Slic-Tite Paste w/ PTFE	LA-CO Industries, Inc.	5
Solder Paste - Alloy SAC305 RA312	AIM	5
Solder Paste - Alloy SAC305 W20	AIM	5

HAZARD COMMUNICATION SAFETY DATA SHEET
PTFE THREAD SEAL TAPE

SECTION 1 – PRODUCT INFORMATION

Distributor's name: Allied Rubber & Gasket Company, Inc. - ARGCO
3145 Tiger Run Court #105
Carlsbad, CA 92010
For information call: (800) 854-1015
Date prepared: 2/16/2023
Product name: PTFE THREAD SEAL TAPE

Identified uses : Pipe Thread Sealing

SECTION 2 – HAZARDS IDENTIFICATION

HMIS HAZARD IDENTIFICATION
Health 1 Flammability 1 Reactivity 0

EMERGENCY OVERVIEW:
SIGNAL WORD: None
Physical Hazards: May become slippery under foot
Acute Health Effects: No known toxicity below 500F
Chronic Health Effects: No chronic health effects are expected

SECTION 3– COMPOSITION/INGREDIENTS

Contains: Polytetrafluoroethylene CAS # 9002-84-0
Polytetrafluoroethylene can emit toxic vapors at temperatures exceeding 700F,
See Section 5 for additional information
Contains 99.5% pure Virgin PTFE

SECTION 4– FIRST AID MEASURES

INHALATION: Not expected to become a significant inhalation hazard under normal conditions of use.
INGESTION: If ingested this product is not expected to cause an acute reactions. Give two glasses of water to drink. Consult a physician.
Never give anything by mouth to an unconscious person.
EYES: Not expected to come in contact with eyes. In the unlikely event of eye exposure no effects are expected other than normal irritation produced by foreign body in eye.
Lasting irritation see a physician.
SKIN: Skin contact may in isolated cases cause allergic reaction common with most other materials. Wash well soap and water. If irritation persists see physician.

SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media: Foam (Aqueous Film Forming Foam), dry chemical, carbon dioxide.

Special Precautions: This compound will not burn unless its pre-heated.
Water fog may be used to cool the containers, however frothing may occur if water is sprayed directly into burning containers.
Do not enter fire area without proper protection.

Hazardous Combustion Products: The thermal decomposition products are highly dependant upon the combustion conditions. Noxious or toxic fumes may be generated, some of which may be toxic or irritating. Polytetrafluoroethylene can eemit toxic fumes when heated to temperatures exceeding 700F. The max operating temperature for this compound is around 500F. At these temps PTFE does not undergo any thermal degradetion and is not hazardous.

SECTION 6-ACCIDENTAL RELEASE

Spills cannot occur. Dispose of any excess material in safe manner. Incineration is to be avoided

SECTION 7 - HANDLING AND STORAGE

Handling: Avoid contact with the skin and eyes. Use good industrial hygiene practices. Keep containers closed. Wash hands after using product and before eating, drinking, smoking, or using toilet facilities.
For operation at ambient temps of -65F to 700F and pressure up to 300 psi.

Storage: Store in a dry place away from moisture, excessive heat and sources of ignition at ambient air temperatures of -65F to 700F and preassure up to 300 psi. Avoid storage near food to prevent food contamination.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation Requirements: In confined areas local and general ventilation should be provided.
Ventilation systems must be designated accorfing to approved engineering standards.

Personal Protection:

Eye: Wearing of protective glasses is recommended when handling any chemicals.

Gloves: Only in rare case where allergies are apparent are gloves necessary.

Respiratory Provide adequate ventilation in workplace.

Other: Eating and smoking should be prohibited in areas where product is handled
Nothing replaces good personal hygiene. Coveralls or other full body clothing shall be worn and properly laundered after use. Workers should wash hands, face, neck and arms before eating, drinking or smoking.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid	Solubility:	Insoluble in water
Color:	Yellow	Freezing Point:	No data available
Odor:	Odorless	Flash Point:	No data available
VOC Content:	Zero Grams per liter	Flammability:	No data available

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under normal conditions.
Reactivity: Unknown

SECTION 11 - TOXILOGICAL INFORMATION

Exposure limits: The limits reported in Section 2 of this document refer to other physical forms of the ingredients present in this product. Limits for the formulated product have not been determined.

SECTION 12 - ECOLOGICAL INFORMATION

General: No special procedures

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste materials must be disposed of in accordance with your municpal, state, provincial and federal regulations. Contact the proper authorities for specific instructions. Avoid incineration

SECTION 14 - TRANSPORATION INFORMATION

DOT Hazard Class: Not regulated
Proper Shipping Name: Not regulated
Identification Number: Not regulated

SECTION 15 - REGULATORY INFORMATION

Ingredient Name:	Polytetrafluoroethylene
SARA 313	N/A
CERCLA RQ	N/A
RCRA	N/A

CA-65 - Chemical Substance identified under the California Proposition 65 column are known to the State of California to Cause and/or reproductive toxicity.
TSCA Status:
All ingredients of product comply with the requirements of the US EPA Toxic Substance Control Act.

SECTION 16 - OTHER INFORMATION

This information is based on data available to us and is accurate and reliable to the best of our knowledge at the time of printing. However, no warranty in expressed or implied regarding the accuracy of completeness of the information contained herein. Final determination of the suitability of this material for the use contemplated is the sole responsibility of the user. Buyer assumes and uses this material on these conditions.

User Responsibility: Each user should read and understand this information and incorporate it into individual site safety programs in accordance with applicable hazard communication standards and regulations.

SOUDAL

SAFETY DATA SHEET

Based upon Regulation (EC) No. 1907/2006, as amended by Regulation (EC) No. 453/2010

Soudal PU Gun and Foam Cleaner

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Product name : Soudal PU Gun and Foam Cleaner

Product type REACH : Mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against:

1.2.1 Relevant identified uses

Detergent according to Regulation (EC) No 648/2004

1.2.2 Uses advised against

No uses advised against known

1.3 Details of the supplier of the safety data sheet:

Supplier of the safety data sheet

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +32 14 42 42 31
+32 14 42 65 14
msds@soudal.com

Manufacturer of the product

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +32 14 42 42 31
+32 14 42 65 14
msds@soudal.com

1.4 Emergency telephone number:

24h/24h (Telephone advice: English, French, German, Dutch):
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

2.1.1 Classification according to Regulation EC No 1272/2008

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Aerosol	category 1	H222: Extremely flammable aerosol.
Aerosol	category 1	H229: Pressurised container: May burst if heated.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
STOT SE	category 3	H336: May cause drowsiness or dizziness.

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC

F+; R12 - Extremely flammable.

Xi; R36 - Irritating to eyes.

R66 - Repeated exposure may cause skin dryness or cracking.

R67 - Vapours may cause drowsiness and dizziness.

2.2 Label elements:

Labelling according to Regulation EC No 1272/2008 (CLP)

Drawn up according to the criteria of Regulation (EU) No 487/2013, 4th adaptation of Regulation (EC) No 1272/2008

Contains: acetone.

Signal word Danger

H-statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

P-statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P280	Wear eye protection/face protection.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P410 + P412	Protect from sunlight. Do no expose to temperatures exceeding 50 °C/ 122°F.
P501	Dispose of contents/container in accordance with local/regional/national/international regulation.

Supplemental information

EUH066	Repeated exposure may cause skin dryness or cracking.

Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Labels

Extremely flammable

Irritant

R-phrases

36	Irritating to eyes
66	Repeated exposure may cause skin dryness or cracking
67	Vapours may cause drowsiness and dizziness

S-phrases

02	Keep out of the reach of children
16	Keep away from sources of ignition - No smoking
23	Do not breathe spray
(46)	(If swallowed, seek medical advice immediately and show this container or label)
51	Use only in well-ventilated areas

Additional recommendations

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C.
Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material.

2.3 Other hazards:

CLP

May be ignited by sparks
Gas/vapour spreads at floor level: ignition hazard
Aerosol may explode under the effect of heat

DSD/DPD

May be ignited by sparks
Gas/vapour spreads at floor level: ignition hazard
Aerosol may explode under the effect of heat

SECTION 3: Composition/information on ingredients

3.1 Substances:

Not applicable

3.2 Mixtures:

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to DSD/DPD	Classification according to CLP	Note	Remark

acetone 01-2119471330-49	67-64-1 200-662-2	C>25 %	R67 F; R11 Xi; R36 R66	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	(1)(2)(10)	Constituent
butane 01-2119474691-32	106-97-8 203-448-7	20%<C<50%	F+; R12	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
propane 01-2119486944-21	74-98-6 200-827-9	20%<C<50%	F+; R12	Flam. Gas 1; H220 Press. Gas - Liquefied gas; H280	(1)(2)(10)	Propellant
(1,3-butadiene, conc<0.1%)						

(1) For R-phrases and H-statements in full: see heading 16
(2) Substance with a Community workplace exposure limit
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1 Description of first aid measures:

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse immediately with plenty of water. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Do not induce vomiting. Consult a doctor/medical service if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed:

4.2.1 Acute symptoms

After inhalation:

EXPOSURE TO HIGH CONCENTRATIONS: Feeling of weakness. Central nervous system depression. Dizziness. Narcosis. Excited/restless. Drunkenness. Disturbed motor response. Headache. Respiratory difficulties. Disturbances of consciousness.

After skin contact:

ON CONTINUOUS EXPOSURE/CONTACT: Dry skin. Cracking of the skin.

After eye contact:

Irritation of the eye tissue.

After ingestion:

No effects known.

4.2.2 Delayed symptoms

No effects known.

4.3 Indication of any immediate medical attention and special treatment needed:

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1 Extinguishing media:

5.1.1 Suitable extinguishing media:

Water spray. BC powder. Sand/earth.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2 Special hazards arising from the substance or mixture:

Upon combustion: CO and CO2 are formed.

5.3 Advice for firefighters:

5.3.1 Instructions:

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistant risk of physical explosion.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Protective goggles. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Protective goggles. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2 Environmental precautions:

Dam up the liquid spill. Use appropriate containment to avoid environmental contamination.

6.3 Methods and material for containment and cleaning up:

Take up liquid spill into a non combustible material e.g.: sand/earth. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4 Reference to other sections:

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1 Precautions for safe handling:

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe normal hygiene standards.

7.2 Conditions for safe storage, including any incompatibilities:

7.2.1 Safe storage requirements:

Storage temperature: < 50 °C. Store in a cool area. Fireproof storeroom. Keep out of direct sunlight. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources, ignition sources, oxidizing agents, (strong) acids, (strong) bases.

7.2.3 Suitable packaging material:

Aerosol.

7.2.4 Non suitable packaging material:

No data available

7.3 Specific end use(s):

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters:

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

The Netherlands

Aceton	Time-weighted average exposure limit 8 h	501 ppm	Public occupational exposure limit value
	Time-weighted average exposure limit 8 h	1210 mg/m³	Public occupational exposure limit value
	Short time value	1002 ppm	Public occupational exposure limit value
	Short time value	2420 mg/m³	Public occupational exposure limit value
n-Butaan	Time-weighted average exposure limit 8 h	592 ppm	Private occupational exposure limit value
	Time-weighted average exposure limit 8 h	1430 mg/m³	Private occupational exposure limit value

EU

Acetone	Time-weighted average exposure limit 8 h	500 ppm	Indicative occupational exposure limit value
	Time-weighted average exposure limit 8 h	1210 mg/m³	Indicative occupational exposure limit value

Belgium

Acétone	Time-weighted average exposure limit 8 h	500 ppm	
	Time-weighted average exposure limit 8 h	1210 mg/m³	
	Short time value	1000 ppm	
	Short time value	2420 mg/m³	
Hydrocarbures aliphatiques sous forme gazeuse : (Alcanes C1-C4)	Time-weighted average exposure limit 8 h	1000 ppm	

USA (TLV-ACGIH)

Acetone	Time-weighted average exposure limit 8 h	500 ppm	TLV - Adopted Value
	Short time value	750 ppm	TLV - Adopted Value
Butane, all isomers	Time-weighted average exposure limit 8 h	1000 ppm	TLV - Adopted Value

Germany

Aceton	Time-weighted average exposure limit 8 h	500 ppm	TRGS 900
	Time-weighted average exposure limit 8 h	1200 mg/m³	TRGS 900
Butan	Time-weighted average exposure limit 8 h	1000 ppm	TRGS 900
	Time-weighted average exposure limit 8 h	2400 mg/m³	TRGS 900
Propan	Time-weighted average exposure limit 8 h	1000 ppm	TRGS 900
	Time-weighted average exposure limit 8 h	1800 mg/m³	TRGS 900

France

Acétone	Time-weighted average exposure limit 8 h	500 ppm	VRC: Valeur réglementaire contraignante
	Time-weighted average exposure limit 8 h	1210 mg/m³	VRC: Valeur réglementaire contraignante
	Short time value	1000 ppm	VRC: Valeur réglementaire contraignante
	Short time value	2420 mg/m³	VRC: Valeur réglementaire contraignante
n-Butane	Time-weighted average exposure limit 8 h	800 ppm	VL: Valeur non réglementaire indicative
	Time-weighted average exposure limit 8 h	1900 mg/m³	VL: Valeur non réglementaire indicative

UK

Acetone	Time-weighted average exposure limit 8 h	500 ppm	Workplace exposure limit (EH40/2005)
	Time-weighted average exposure limit 8 h	1210 mg/m³	Workplace exposure limit (EH40/2005)
	Short time value	1500 ppm	Workplace exposure limit (EH40/2005)
	Short time value	3620 mg/m³	Workplace exposure limit (EH40/2005)
Butane	Time-weighted average exposure limit 8 h	600 ppm	Workplace exposure limit (EH40/2005)
	Time-weighted average exposure limit 8 h	1450 mg/m³	Workplace exposure limit (EH40/2005)
	Short time value	750 ppm	Workplace exposure limit (EH40/2005)
	Short time value	1810 mg/m³	Workplace exposure limit (EH40/2005)

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

If applicable and available it will be listed below.

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL - Workers

acetone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute local effects inhalation	2420 mg/m³	
	Long-term systemic effects dermal	186 mg/kg bw/day	
	Long-term systemic effects inhalation	1210 mg/m³	

DNEL - General population

acetone

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects dermal	62 mg/kg bw/day	
	Long-term systemic effects inhalation	200 mg/m³	
	Long-term systemic effects oral	62 mg/kg bw/day	

PNEC

acetone

Compartments	Value	Remark
Fresh water	10.6 mg/l	
Marine water	1.06 mg/l	
Aqua (intermittent releases)	21 mg/l	
Fresh water sediment	30.4 mg/kg sediment dw	
Marine water sediment	3.04 mg/kg sediment dw	
Soil	29.5 mg/kg soil dw	
STP	100 mg/l	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2 Exposure controls:

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly.

8.2.2 Individual protection measures, such as personal protective equipment

Observe normal hygiene standards. Do not eat, drink or smoke during work.

a) Respiratory protection:

Wear gas mask with filter type A if conc. in air > exposure limit.

b) Hand protection:

Gloves.

c) Eye protection:

Protective goggles.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Physical form	Aerosol
Odour	Acetone odour
Odour threshold	No data available
Colour	Colourless
Particle size	No data available
Explosion limits	1.8 - 13 vol %
Flammability	Extremely flammable aerosol.
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	Not applicable
Boiling point	Not applicable
Flash point	Not applicable
Evaporation rate	No data available
Relative vapour density	No data available
Vapour pressure	8530 hPa ; 20 °C
Solubility	water ; Complete
	ethanol ; soluble
	ether ; soluble
Relative density	No data available
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

Physical hazards

Flammable aerosol

9.2 Other information:

Absolute density	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity:
May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. No data available.

10.2 Chemical stability:
Stable under normal conditions.

10.3 Possibility of hazardous reactions:
No data available.

10.4 Conditions to avoid:
Use spark-/explosionproof appliances and lighting system. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

10.5 Incompatible materials:
Oxidizing agents, (strong) acids, (strong) bases.

10.6 Hazardous decomposition products:
Upon combustion: CO and CO2 are formed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects:
11.1.1 Test results

Acute toxicity

Soudal PU Gun and Foam Cleaner

Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination
Oral	LD50		>5000 mg/kg bw		Rat		Calculated value

acetone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination
Oral	LD50	Equivalent to OECD 401	5800 mg/kg		Rat	Female	Experimental value
Dermal	LD50	Equivalent to OECD 402	20000 mg/kg		Rabbit	Male	Experimental value
Dermal	LD50		>7426 mg/kg bw		Rabbit	Female	Weight of evidence
Inhalation (vapours)	LC50	Other	76 mg/l	4 h	Rat	Female	Experimental value
Inhalation (vapours)	LCL0	Other	16000 ppm	4 h	Rat		Experimental value

Judgement is based on the relevant ingredients

Conclusion

Low acute toxicity by the dermal route

Low acute toxicity by the oral route

Low acute toxicity by the inhalation route

Corrosion/irritation

Soudal PU Gun and Foam Cleaner

No (test)data on the mixture available

acetone

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination
Eye	Irritating	OECD 405		24; 48; 72 hours	Rabbit	Weight of evidence
Skin	Not irritating	Other	3 day(s)	24; 48; 72 hours	Guinea pig	Weight of evidence
Inhalation	Slightly irritating	Human observation study	20 minutes		Human	Literature

Classification is based on the relevant ingredients

Conclusion

Causes serious eye irritation.

Not classified as irritating to the skin

Respiratory or skin sensitisation

Soudal PU Gun and Foam Cleaner

No (test)data on the mixture available

acetone

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Gender	Value determination
Skin	Not sensitizing	Guinea pig maximisation test		48 hours	Hamster	Female	Experimental value
Skin	Not sensitizing	Human observation			Human		Literature

Judgement is based on the relevant ingredients

Conclusion

Not classified as sensitizing for skin

Not classified as sensitizing for inhalation

Specific target organ toxicity

Soudal PU Gun and Foam Cleaner

No (test)data on the mixture available

acetone

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Gender	Value determination
Oral	NOAEL	Equivalent to OECD 408	20 mg/l		No effect	13 week(s)	Mouse	Male/female	Experimental value
Dermal									Not relevant, expert judgement
Inhalation (vapours)	NOAEC	Other	19000 ppm		No effect	8 week(s)	Rat	Male	Literature
Inhalation (vapours)		Human observation study	361 ppm	Central nervous system	neurotoxic effects	2 day(s)	Human		Inconclusive, insufficient data

Classification is based on the relevant ingredients

Conclusion

Low sub-chronic toxicity by the dermal route

Low sub-chronic toxicity by the oral route

Low sub-chronic toxicity by inhalation route

May cause drowsiness or dizziness.

Mutagenicity (in vitro)

Soudal PU Gun and Foam Cleaner

No (test)data on the mixture available

acetone

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value
Negative	Equivalent to OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value

Mutagenicity (in vivo)

Soudal PU Gun and Foam Cleaner

No (test)data on the mixture available

acetone

Result	Method	Exposure time	Test substrate	Gender	Organ	Value determination
Negative		13 week(s)	Mouse	Male/female		Literature

Carcinogenicity

Soudal PU Gun and Foam Cleaner

No (test)data on the mixture available

acetone

Route of exposure	Parameter	Method	Value	Exposure time	Species	Gender	Value determination	Organ	Effect
Dermal	NOEL	Other	79 mg	51 week(s)	Mouse	Female	Literature		No effect

Reproductive toxicity

Soudal PU Gun and Foam Cleaner

No (test)data on the mixture available

acetone

	Parameter	Method	Value	Exposure time	Species	Gender	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Equivalent to OECD 414	11000 ppm	6-19 days (gestation, daily)	Rat	Male/female			Experimental value
Effects on fertility	NOAEL	Other	900 mg/kg bw/day	13 week(s)	Rat	Male	No effect		Literature

Judgement is based on the relevant ingredients

Conclusion CMR

Not classified for carcinogenicity

Not classified for mutagenic or genotoxic toxicity

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

Soudal PU Gun and Foam Cleaner

No (test)data on the mixture available

acetone

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Gender	Value determination
			Skin	Skin dryness or cracking				Literature study

Judgement is based on the relevant ingredients

Conclusion

Repeated exposure may cause skin dryness or cracking.

Chronic effects from short and long-term exposure

Soudal PU Gun and Foam Cleaner

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Red skin. Skin rash/inflammation. Dry/sore throat. Headache. Nausea. Feeling of weakness. Loss of weight. Possible inflammation of the respiratory tract.

SECTION 12: Ecological information

12.1 Toxicity:

Soudal PU Gun and Foam Cleaner

No (test)data on the mixture available

acetone

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	EU Method C.1	5540 mg/l	96 h	Salmo gairdneri	Static system	Fresh water	Experimental value; Nominal concentration
Acute toxicity invertebrates	LC50	Other	12600 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; Nominal concentration
Toxicity algae and other aquatic plants	EC50		>7000 mg/l	96 h	Selenastrum capricornutum	Static system	Fresh water	Experimental value; Nominal concentration

Judgement is based on the relevant ingredients of the mixture

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2 Persistence and degradability:

acetone

Biodegradation water

Method	Value	Duration	Value determination
OECD 301B: CO2 Evolution Test	90.9 %	28 day(s)	Experimental value

Conclusion

Contains readily biodegradable component(s)

12.3 Bioaccumulative potential:

Soudal PU Gun and Foam Cleaner

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

acetone

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		0.69		Pisces	

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF	BCFWIN	3			Calculated value

Log Kow

Method	Remark	Value	Temperature	Value determination
		-0.24		Test data

Conclusion

Does not contain bioaccumulative component(s)

12.4 Mobility in soil:

No (test)data on mobility of the components available

12.5 Results of PBT and vPvB assessment:

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

12.6 Other adverse effects:

Soudal PU Gun and Foam Cleaner

Global warming potential (GWP)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1 Waste treatment methods:

13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
20 01 29* (separately collected fractions (except 15 01): detergents containing dangerous substances). Depending on branch of industry and production process, also other waste codes may be applicable. Hazardous waste according to Directive 2008/98/EC.

13.1.2 Disposal methods

Refer to manufacturer/supplier for information on recovery/ recycling. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1 UN number:

UN number	1950

14.2 UN proper shipping name:

Proper shipping name	Aerosols

14.3 Transport hazard class(es):

Hazard identification number	
Class	2
Classification code	5F

14.4 Packing group:

Packing group	
Labels	2.1

14.5 Environmental hazards:

Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Rail (RID)

14.1 UN number:

UN number	1950

14.2 UN proper shipping name:

Proper shipping name	Aerosols

14.3 Transport hazard class(es):

Hazard identification number	23
Class	2
Classification code	5F

14.4 Packing group:

Packing group	
Labels	2.1

14.5 Environmental hazards:

Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Inland waterways (ADN)

14.1 UN number:

UN number	1950

14.2 UN proper shipping name:

Proper shipping name	Aerosols

14.3 Transport hazard class(es):

Class	2
Classification code	5F

14.4 Packing group:

Packing group	
Labels	2.1

14.5 Environmental hazards:

Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	190
Special provisions	327
Special provisions	344
Special provisions	625
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

Sea (IMDG/IMSBC)

14.1 UN number:

UN number	1950

14.2 UN proper shipping name:

Proper shipping name	Aerosols

14.3 Transport hazard class(es):

Class	2.1

14.4 Packing group:

Packing group	
Labels	2.1

14.5 Environmental hazards:

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	63
Special provisions	190
Special provisions	277
Special provisions	327
Special provisions	344
Special provisions	959
Limited quantities	Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg. (gross mass)

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Annex II of MARPOL 73/78	Not applicable

Air (ICAO-TI/IATA-DGR)

14.1 UN number:

UN number	1950

14.2 UN proper shipping name:

Proper shipping name	Aerosols, flammable

14.3 Transport hazard class(es):

Class	2.1

14.4 Packing group:

Packing group	
Labels	2.1

14.5 Environmental hazards:

Environmentally hazardous substance mark	no

14.6 Special precautions for user:

Special provisions	A145
Special provisions	A167
Special provisions	A802
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	30 kg G

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
100 %	

VOC content Directive 2004/42/EC

715.9 g/l				

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

	Designation of the substance, of the group of substances or of the mixture	Conditions of restriction
· acetone	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects,2. Articles not complying with paragraph 1 shall not be placed on the market.3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304,4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of

		lamps — may lead to life- threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'
· acetone	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopee" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs.2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: "For professional users only".3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC.4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

Reference legislation

See column 1: 3.

See column 1: 40.

National legislation The Netherlands

Soudal PU Gun and Foam Cleaner

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 06
Waterbezwaarlijkheid	8

National legislation Germany

Soudal PU Gun and Foam Cleaner

WGK	1; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

acetone

TA-Luft	TA-Luft Klasse 5.2.5
Schwangerschaft Gruppe	D
MAK 8-Stunden-Mittelwert ppm	Aceton; 500 ppm
MAK 8-Stunden-Mittelwert mg/m³	Aceton; 1200 mg/m³

National legislation France

Soudal PU Gun and Foam Cleaner

No data available

National legislation Belgium

Soudal PU Gun and Foam Cleaner

No data available

15.2 Chemical safety assessment:

No chemical safety assessment is required.

SECTION 16: Other information

Full text of any R-phrases referred to under headings 2 and 3:

R36 Irritating to eyes
R66 Repeated exposure may cause skin dryness or cracking
R67 Vapours may cause drowsiness and dizziness

Full text of any H-statements referred to under headings 2 and 3:

H220 Extremely flammable gas.

H222 Extremely flammable aerosol.
H225 Highly flammable liquid and vapour.
H229 Pressurised container: May burst if heated.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive
DPD Dangerous Preparation Directive
CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.

Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

MAINLINE PURPLE PRIMER

Version number: 1.0 Date of compilation: 2022-05-17

SECTION 1: Identification

1.1 Product identifier

Trade name **MAINLINE PURPLE PRIMER**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses primer

1.3 Details of the supplier of the safety data sheet

Hajoca Corporation
2001 Joshua Road
Lafayette Hill, PA 19444
Telephone: 225-295-4212

1.4 Emergency telephone number

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Hazard class	Category
acute toxicity (oral)	4
acute toxicity (inhal.)	4
skin corrosion/irritation	2
serious eye damage/eye irritation	2
specific target organ toxicity - single exposure (respiratory tract irritation)	3
specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3
flammable liquid	2

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word danger
- Pictograms

GHS02, GHS07

- Hazard statements

H225	Highly flammable liquid and vapor.
H302+H332	Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

- Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
P301+P312	If swallowed: Call a poison center/doctor if you feel unwell.
P302+P352	If on skin: Wash with plenty of water.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a poison center/doctor if you feel unwell.
P321	Specific treatment (see on this label).
P330	Rinse mouth.
P362	Take off contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling cyclohexanone, methyl ethyl ketone, acetone

2.3 Other hazards

Hazards not otherwise classified

Contains proprietary additive. May produce an allergic reaction.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS
cyclohexanone	CAS No 108-94-1	25 - < 50	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 3 / H331 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 STOT SE 3 / H335 Flam. Liq. 3 / H226
methyl ethyl ketone	CAS No 78-93-3	25 - < 50	Eye Irrit. 2 / H319 STOT SE 3 / H336 Flam. Liq. 2 / H225
acetone	CAS No 67-64-1	10 - < 25	Eye Irrit. 2 / H319 STOT SE 3 / H336 Flam. Liq. 2 / H225
proprietary additive	CAS No 81-48-1	< 1	Skin Sens. 1B / H317

For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Narcotic effects.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2)

Flash point	1.4 °F

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.

- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- Ventilation requirements

Keep any substance that emits harmful vapors or gases in a place that allows these to be permanently extracted. Use local and general ventilation. Ground/bond container and receiving equipment.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA (ppm)	TWA (mg/m³)	STEL (ppm)	STEL (mg/m³)	Ceiling-C (ppm)	Ceiling-C (mg/m³)	Notation	Source
US	cyclohexanone	108-94-1	PEL (CA)	25	100						Cal/OSHA PEL
US	cyclohexanone	108-94-1	REL	25 (10 h)	100 (10 h)						NIOSH REL

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
US	cyclohexanone	108-94-1	PEL	50	200						29 CFR 1910.1000
US	cyclohexanone	108-94-1	TLV®	20		50				H	ACGIH® 2022
US	acetone	67-64-1	PEL (CA)	500	1,200	750	1,780	3,000			Cal/OSHA PEL
US	acetone	67-64-1	REL	250 (10 h)	590 (10 h)						NIOSH REL
US	acetone	67-64-1	TLV®	250		500					ACGIH® 2022
US	acetone	67-64-1	PEL	1,000	2,400						29 CFR 1910.1000
US	2-butanone	78-93-3	REL	200 (10 h)	590 (10 h)	300	885				NIOSH REL
US	2-butanone (methyl ethyl ketone)	78-93-3	PEL	200	590						29 CFR 1910.1000
US	methyl ethyl ketone	78-93-3	TLV®	200		300					ACGIH® 2022
US	methyl ethyl ketone (MEK) (2-butanone) (ethyl methyl ketone)	78-93-3	PEL (CA)	200	590	300	885				Cal/OSHA PEL

Notation

Ceiling-C ceiling value is a limit value above which exposure should not occur

H absorbed through the skin

STEL short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified

Biological limit values

Country	Name of agent	Parameter	Notation	Identifier	Value	Source
US	cyclohexanone	1,2-cyclohexanediol	hydr	BEI®	80 mg/l	ACGIH® 2022
US	cyclohexanone	cyclohexanol	hydr	BEI®	8 mg/l	ACGIH® 2022
US	acetone	acetone		BEI®	25 mg/l	ACGIH® 2022
US	methyl ethyl ketone	methyl ethyl ketone		BEI®	2 mg/l	ACGIH® 2022

Notation

hydr hydrolysis

Relevant DNELs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
cyclohexanone	108-94-1	DNEL	10 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
cyclohexanone	108-94-1	DNEL	20 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
cyclohexanone	108-94-1	DNEL	10 mg/m³	human, inhalatory	worker (industry)	chronic - local effects
cyclohexanone	108-94-1	DNEL	20 mg/m³	human, inhalatory	worker (industry)	acute - local effects
cyclohexanone	108-94-1	DNEL	4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
cyclohexanone	108-94-1	DNEL	4 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects
methyl ethyl ketone	78-93-3	DNEL	600 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
methyl ethyl ketone	78-93-3	DNEL	1,161 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
acetone	67-64-1	DNEL	1,210 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
acetone	67-64-1	DNEL	2,420 mg/m³	human, inhalatory	worker (industry)	acute - local effects
acetone	67-64-1	DNEL	186 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
cyclohexanone	108-94-1	PNEC	0.356 mg/l	aquatic organisms	freshwater	short-term (single instance)
cyclohexanone	108-94-1	PNEC	0.036 mg/l	aquatic organisms	marine water	short-term (single instance)
cyclohexanone	108-94-1	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
cyclohexanone	108-94-1	PNEC	2.69 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
cyclohexanone	108-94-1	PNEC	0.269 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
cyclohexanone	108-94-1	PNEC	0.328 mg/kg	terrestrial organisms	soil	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	55.8 mg/l	aquatic organisms	freshwater	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	55.8 mg/l	aquatic organisms	marine water	short-term (single instance)

Relevant PNECs of components of the mixture

Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
methyl ethyl ketone	78-93-3	PNEC	709 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	284.7 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	284.7 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
methyl ethyl ketone	78-93-3	PNEC	22.5 mg/kg	terrestrial organisms	soil	short-term (single instance)
acetone	67-64-1	PNEC	10.6 mg/l	aquatic organisms	freshwater	short-term (single instance)
acetone	67-64-1	PNEC	1.06 mg/l	aquatic organisms	marine water	short-term (single instance)
acetone	67-64-1	PNEC	100 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
acetone	67-64-1	PNEC	30.4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
acetone	67-64-1	PNEC	3.04 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
acetone	67-64-1	PNEC	29.5 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	violet
Particle	not relevant (liquid)
Odor	pleasant

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	56.05 °C
Flash point	-17 °C
Flash point	1.4 °F
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Vapor pressure	240 hPa at 20 °C
Density	0.857 $^{g}/_{cm^3}$ at 73 °F
Vapor density	this information is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	420 °C (auto-ignition temperature (liquids and gases))
Viscosity	not determined
Explosive properties	none
Oxidizing properties	none

9.2 Other information

VOC content	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: <= 400 g/L.
Temperature class (USA, acc. to NEC 500)	T2 (maximum permissible surface temperature on the equipment: 300°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Harmful if swallowed. Harmful if inhaled.

GHS of the United Nations, annex 4: May be harmful in contact with skin.

- Acute toxicity estimate (ATE)

Oral	1,250 $^{mg}/_{kg}$
Inhalation: vapor	15.5 $^{mg}/_{l}$/4h

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	CAS No	Exposure route	ATE
cyclohexanone	108-94-1	oral	500 $^{mg}/_{kg}$
cyclohexanone	108-94-1	dermal	1,100 $^{mg}/_{kg}$
cyclohexanone	108-94-1	inhalation: vapor	>6.2 $^{mg}/_{l}$/4h

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Contains proprietary additive. May produce an allergic reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans			
Name of substance	CAS No	Classification	Number
cyclohexanone	108-94-1	3	

Legend

3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Information on this property is not available.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number

DOT	UN 1993
IMDG-Code	UN 1993
ICAO-TI	UN 1993

14.2 UN proper shipping name

DOT	Flammable liquid, n.o.s.
IMDG-Code	FLAMMABLE LIQUID, N.O.S.

ICAO-TI	Flammable liquid, n.o.s.
Technical name (hazardous ingredients)	acetone, methyl ethyl ketone

14.3 Transport hazard class(es)

DOT	3
IMDG-Code	3
ICAO-TI	3

14.4 Packing group

DOT	II
IMDG-Code	II
ICAO-TI	II

14.5 Environmental hazards non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (acetone, methyl ethyl ketone, solution), 3, II
Reportable quantity (RQ)	12,500 lbs (5,675 kg) (cyclohexanone) (acetone)
Danger label(s)	3

Special provisions (SP)	IB2, T7, TP1, TP8, TP28
ERG No	128

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant	-
Danger label(s)	3

Special provisions (SP)	274
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L
EmS	F-E, S-E
Stowage category	B

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Danger label(s)	3

Special provisions (SP)	A3
Excepted quantities (EQ)	E2
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
methyl ethyl ketone	78-93-3		3 4	5000 (2270)
cyclohexanone	108-94-1		4	5000 (2270)
acetone	67-64-1		4	5000 (2270)

Legend

3	"3" indicates that the source is section 112 of the Clean Air Act
4	"4" indicates that the source is section 3001 of the Resource Conservation and Recovery Act (RCRA)

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
methyl ethyl ketone	78-93-3		CA TACs OEHHA RELs
acetone	67-64-1		ATSDR Neurotoxicants

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
methyl ethyl ketone	78-93-3				1.0 %
cyclohexanone	108-94-1				1.0 %
acetone	67-64-1				1.0 %

- Hazardous Substances List (MN-ERTK)

Name of substance	CAS No	References	Remarks
methyl ethyl ketone	78-93-3	A, N, O	
cyclohexanone	108-94-1	A, N, O	skin
acetone	67-64-1	A, N, O	

Legend

A	American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH
N	National Institute for Occupational Safety and Health (NIOSH), "Recommendations for Occupational Safety and Health Standards," August 1988, available from NIOSH, Publications Dissemination Office, Division of Standards Development and Technology Transfer
O	Occupational Safety and Health Administration (OSHA), Safety and Health Standards, Code of Federal Regulations, title 29, part 1910, subpart Z, "Toxic and Hazardous Substances, 1990." General information: Minnesota Department of Labor and Industry, Occupational Safety and Health Division
skin	If a potential for absorption from skin contact merits special consideration, the word "skin" follows the substance name.

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
methyl ethyl ketone	78-93-3		F3
cyclohexanone	108-94-1		F2
acetone	67-64-1		F3

Legend

F2	Flammable - Second Degree
F3	Flammable - Third Degree

- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
2-BUTANONE	78-93-3	E
CYCLOHEXANONE	108-94-1	E
2-PROPANONE	67-64-1	E

Legend

E	Environmental hazard

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
methyl ethyl ketone	78-93-3	T, F
cyclohexanone	108-94-1	T, F
acetone	67-64-1	T, F

Legend
F Flammability (NFPA®)
T Toxicity (ACGIH®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	2	temporary or minor injury may occur
Flammability	3	material that can be ignited under almost all ambient temperature conditions
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	3	material that can be ignited under almost all ambient temperature conditions
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
TR	CICR	not all ingredients are listed

Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

Abbr	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists

Abbr.	Descriptions of used abbreviations
ACGIH® 2022	From ACGIH®, 2022 TLVs® and BEIs® Book. Copyright 2022. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LHS	Lower hazard substance
NFPA®	National Fire Protection Association (United States)
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NLP	No-Longer Polymer
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)

Abbr.	Descriptions of used abbreviations
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitization
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TLV®	Threshold Limit Values
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

SAFETY DATA SHEET

1. Identification

Product identifier **Oatey Purple Primer Cleaner**

Other means of identification

Product code 1401E

Synonyms Part Numbers: 30766, 30779, 30782, 30795, 30805, 30780, 30783, 30796, 30768, 30806, 30769

Recommended use Joining PVC Pipes

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name Oatey Co.

Address 4700 West 160th St.
Cleveland, OH 44135

Telephone 216-267-7100

E-mail info@oatey.com

Transport Emergency Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)

Emergency First Aid 1-877-740-5015

Contact person MSDS Coordinator

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Acetone	67-64-1	70-100
Cyclohexanone	108-94-1	1-5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3
		1000 ppm
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3
		50 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm
	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3
		25 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexanediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Cyclohexanone (CAS 108-94-1) Skin designation applies.

US - Tennessee OELs: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

Appropriate engineering controls Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear appropriate chemical resistant clothing.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Translucent liquid.

Color Purple

Odor Solvent.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range 133 °F (56.11 °C)

Flash point -4.0 °F (-20.0 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.79 +/- 0.02
Solubility(ies)	
Solubility (water)	Miscible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	< 10 cP
Other information	
Bulk density	7 lb/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
VOC (Weight %)	<25 g/l SQACMD Method 24

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours

Components	Species	Test Results
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral		
LD50	Rat	1540 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Cyclohexanone (CAS 108-94-1) 3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Cyclohexanone (CAS 108-94-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Acetone (CAS 67-64-1)	-0.24
Cyclohexanone (CAS 108-94-1)	0.81

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1993
UN proper shipping name	Flammable liquids, n.o.s. (Acetone RQ = 5128 LBS)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB2, T7, TP1, TP8, TP28
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1993
UN proper shipping name	Flammable liquid, n.o.s. (Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3H
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Acetone)
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532

US state regulations

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 27-May-2015

Revision date -

Version # 01

HMIS® ratings Health: 2
Flammability: 3
Physical hazard: 0

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

BLACK SWAN MFG. CO.

GHS SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Manufacturer:
Black Swan Mfg. Co.
4540 W. Thomas St.
Chicago, IL 60651-3318
Tel.: 800-252-5796
Fax: 773-227-3705
Web Site : www.blackswanmfg.com
E-mail : info@blackswanmfg.com

For any Transportation or Medical Chemical Emergencies call:

INFOTRAC

(800) 535-5053 **OR** (352) 323-3500

24 hours per day - 7 days a week

Product Name: Putty Tape

Recommended Use: For sealing and weather proofing joints on metal, glass, plastic and wood surfaces.

SECTION 2 – HAZARD(S) IDENTIFICATION

Labels
None

Signal Word
None

HMIS

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0

NFPA

GHS Classification

Health
Acute Toxicity: Not Established
Skin Irritation: Not Established
Eye Irritation: Not Established
Skin Sensitization: NO

Environmental
Acute Aquatic Toxicity: Not Established
Chronic Aquatic Toxicity: Not Established

Physical
None

Hazardous Statements
None

Precautionary Statements
P102 : Keep out of reach of children

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemicals	CAS#	EINECS#	REACH Pre-registration Number	Approx %
LIME STONE	1317-65-3	N/A	N/A	50-100%
QUARTZ (Si02)	14808-60-7	N/A	N/A	≤2.5%
TITANIUM DIOXIDE	13463-67-7	N/A	N/A	≤1.0%

*Unlisted ingredients are not classified as hazardous according to OSHA 1910.1200.

SECTION 4 – FIRST-AID MEASURES

Inhalation: None.
Skin: Wash skin thoroughly with soap and water.
Eyes: Flush with water for 15 minutes. If irritation persists, get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Contact physician immediately.

SECTION 5 – FIRE-FIGHTING MEASURES

Fire Hazard: None.
Combustion Products: None.
Extinguishing Media: Carbon Dioxide Gas, Dry Chemical Powder, Water.
Unsuitable Extinguishing Media: None Known.
Protective Equipment: None.
Special Fire Fighting Procedures: Wear a self-contained breathing apparatus.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions: None.
Protective Equipment: None.
Emergency Procedures: None.
Environmental Precautions: None.
Methods for Cleaning Up: Clean up by scrapping and put in a container for disposal.

SECTION 7 – HANDLING AND STORAGE

Handling	Storage
No special precautions.	No special precautions.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

This product is not classified as hazardous according to OSHA 1910.1200.

Engineering Controls: A source of running water to flush or wash the eyes and skin in case of contact. Use local exhaust as needed.
Ventilation: Local ventilation is adequate.
Personal Protective Equipment – Respiratory: None. **Skin:** Cotton Gloves. **Eyes:** Safety Glasses.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Beige Putty	**Flash Point**:	Not Established	**Vapor Pressure**:	Not Established
Odor:	Nearly Odorless	**Specific Gravity**:	1.68 @ 77°F	**Flammability**:	Not Established
pH:	Not Established	**Solubility (H2O):**	Insoluble	**Flammability Limits**:	LEL – Not Established
Melting Point:	Not Established	**Evaporation Rate**:	Not Established		UEL – Not Established
Freezing Point:	Not Established	**Vapor Density**:	Not Established		
Boiling Point:	Not Established	**VOC**:	0 g/l		

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable.
Hazardous polymerization: Will not occur.
Conditions to avoid: Excess heat and direct flame.
Incompatible materials: None known.
Hazardous decomposition products: Carbon Dioxide and unidentified organic compounds when burning.

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicity

This product is not classified as hazardous according to OSHA 1910.1200.

Likely Routes of Exposure: Skin Contact.
Symptoms and Effect - Inhalation: None. **Skin Contact:** Mild irritation; possible dermatitis. **Eye Contact:** Mild irritation.
Ingestion: None.
Long-Term Effect: None known.
Pre-Existing Conditions: None known.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: None known.
Persistance & Degradability: None known.
Bioaccumulative Potential: None known.
Mobility in soil: None known.

SECTION 13 – DISPOSAL CONSIDERATION

Dispose of product or container in accordance with federal, state or local regulations.

SECTION 14 – TRANSPORTATION INFORMATION

D.O.T. (U.S.): Not Regulated.

SECTION 15 – REGULATORY INFORMATION

Precautionary Label Information: None.
Risk Phrases: None.
Safety Phrases: **S2**-Keep out of reach of children.

SECTION 16 – OTHER INFORMATION

Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. Black Swan Mfg. Co. urges the customers receiving this Material Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents and contractors of the information on the sheets. **DATE: 01/01/2023**

SAFETY DATA SHEET

1. Identification

Product identifier PVC All Weather Clear Cement

Other means of identification

Product code 1105E

Synonyms Part Numbers: 31132, 31133, 31135, 31136, 31137

Recommended use Joining PVC Pipes

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name Oatey Co.

Address 4700 West 160th St.
Cleveland, OH 44135

Telephone 216-267-7100

E-mail info@oatey.com

Transport Emergency Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)

Emergency First Aid 1-877-740-5015

Contact person MSDS Coordinator

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Furan, Tetrahydro-	109-99-9	35-55
Acetone	67-64-1	10-25
Polyvinyl chloride	9002-86-2	12-20
Cyclohexanone	108-94-1	10-20
Silica, amorphous, fumed	112945-52-5	1-5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Polyvinyl chloride (CAS 9002-86-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
		200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3
		20 mppcf

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
	TWA	50 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3
		25 ppm
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3
		250 ppm
	TWA	590 mg/m3
		200 ppm
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	6 mg/m3

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexanediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofuran	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Cyclohexanone (CAS 108-94-1) Skin designation applies.

US - Tennessee OELs: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 109-99-9) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Cyclohexanone (CAS 108-94-1)	Can be absorbed through the skin.

Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection	Face shield is recommended. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Gray.
Odor	Solvent.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	-4.0 °F (-20.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.95 +/- 0.02
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	600 - 1500 cP
Other information	
VOC (Weight %)	< 510 g/l SCAQMD 1168/M316A

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral		
LD50	Rat	1540 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Cyclohexanone (CAS 108-94-1)	3 Not classifiable as to carcinogenicity to humans.
Polyvinyl chloride (CAS 9002-86-2)	3 Not classifiable as to carcinogenicity to humans.
Silica, amorphous, fumed (CAS 112945-52-5)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Cyclohexanone (CAS 108-94-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Acetone (CAS 67-64-1)	-0.24
Cyclohexanone (CAS 108-94-1)	0.81
Furan, Tetrahydro- (CAS 109-99-9)	0.46

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	T11, TP1, TP8, TP27
Packaging exceptions	150
Packaging non bulk	201
Packaging bulk	243

IATA

UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1133
UN proper shipping name	ADHESIVES
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer
	Central nervous system
	Liver
	Blood
	Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1) 6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1) 35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1) 6532

US state regulations

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Silica, amorphous, fumed (CAS 112945-52-5)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Polyvinyl chloride (CAS 9002-86-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Silica, amorphous, fumed (CAS 112945-52-5)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	27-May-2015
Revision date	-
Version #	01
HMIS® ratings	Health: 2 Flammability: 3 Physical hazard: 0
NFPA ratings	
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

Proto corp
Engineered Thermoplastics

Safety Data Sheet
Proto Corporation

Section 1 – Product and Company Information

Product Name: Proto ® PVC Fitting Covers and Jacketing

Proto Corporation
10500 47th Street North
Clearwater, FL 33762

Emergency Telephone Number: CHEMTREC: 800-424-9300 or 1-703-741-5500

Customer Information: 800-875-7768

Section 2 – Hazardous Identification

Hazardous Components

GHS Classification
Not a hazardous substance or mixture

GHS Label element
Not a hazardous substance or mixture

No other known hazards

Section 3 – Composition and Information on Ingredients

General Product Description:
Thermoformed plastic fitting covers of varying shapes and sizes, including jacketing.

Section 4 – First Aid Measures

First Aid – Inhalation:
None Required
First Aid – Skin:
None Required
First Aid – Ingestion:
None Required
First Aid - Eyes:
None Required
First Aid – Ears:
None Required

Issue Date: 7/22/2022

Section 5 – Firefighting Measures

Flash Point: Not applicable

Method Used: Not applicable

Upper Flammable Limit (UFL): Not applicable

Lower Flammable Limit (LFL): Not applicable

Auto Ignition: Not determined

Flammability Classification: Not determined

Rate of Burning: Not determined

General Fire Hazards:

There is no potential for spontaneous fire or explosion. If exposed to fire, product may melt and drops of molten product may cause burns.

Extinguishing Media:

Carbon Dioxide (CO^2), Dry Chemical

Fire Fighting Equipment/Instructions:

No special procedures are expected to be necessary for this product. Normal firefighting procedures should be followed to avoid inhalation of smoke and gases.

Section 6 – Accidental Release Measures

Clean-Up Procedures

Vacuum up dusts.

Section 7 – Handling and Storage

Handling Procedure

Handle in accordance with good industrial hygiene and safety practices.

Storage Procedures

Warehouse storage should be in accordance with packaging directions. Material should be kept dry and in original packaging.

Section 8 – Exposure Controls and Personal Protective Equipment

A: Component Exposure Limits:

This material has no components listed.

B: Personal Protective Equipment:

i. **Personal Protective Equipment: Eyes and Face**
None required
Personal Protective Equipment: Ears
None required

ii. **Personal Protective Equipment: Skin**
None required

iii. **Personal Protective Equipment: Respiratory**
None required

iv. **Ventilation:**
None required

v. **Personal Protective Equipment: General**
None required

Section 9 – Physical/Chemical Properties

Appearance: Thermoformed plastic fitting covers of varying colors shapes and sizes, including jacketing.

Odor: No Odor

Physical State: Solid

Vapor Pressure: Not determined

Boiling Point: Not determined

Solubility (H_2O): Nil

Freezing Point: Not applicable

Percent Volatile: 0

pH: Not determined

Vapor Density: Not determined

Melting Point Not determined

Specific Gravity: Variable

Evaporation Rate: Not applicable

VOC: Not determined

Section 10 – Stability and Reactivity Information

Stability

These products are not reactive.

Hazardous Decomposition

This product will not decompose at temperatures > 300°C. May form carbon dioxide and carbon monoxide.

Hazardous Polymerization

Will not occur.

Section 11 – Toxicological Information

Acute Toxicity

A. General Product Information

If dust evolves from this product during use, it may cause temporary mechanical irritation or scratchiness of the throat and/or itching of the eyes and skin.

B. Component Analysis

This material has no components listed.

Section 12 – Ecological Information

Ecotoxicity

A. General Product Information

No data available for this product.

B. Component Analysis – Ecotoxicity – Aquatic Toxicity

This material has no components listed.

Section 13 – Disposal Considerations

US EPA Waste Number and Description

A. General Product Information

This product is not expected to be a hazardous waste when it is disposed of according to the U.S Environmental Protection Agency (EPA) under Resource Conservation and Recovery (RCRA) regulations. Product characterization after use is recommended to ensure proper disposal under Federal and/or State requirements.

B. Component Waste Numbers

This material has no component listed.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14– Transport Information

International Transport Regulations

These products are not classified as dangerous goods according to international transport regulations.

Section 15 – Regulatory Information

US Federal Regulations

A. General Information

SARA 311/312. The product is not classified as hazardous under SARA 311/312

B. Component Analysis

This material has no components listed.

State Regulations

A. General Product Information

Other State regulation may apply. Check individual state requirements.

Component Analysis - State

This material has no components listed.

B. TSCA Status

This material has no components listed.

International Regulations

A. General Information

These products are considered articles under both U.S and international product regulations and, as such, these products do not require registration or notification on the various country-specific inventories.

B. Component Analysis – WHMIS IDL

This material has no components listed.

WHMIS Classification

This is not a WHMIS controlled product. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations. This SDS contains all the information required by the Controlled Products Regulations.

Section 16 – Other Information

Other Information

Prepared by:
Proto Corporation
10500 47th Street North
Clearwater, FL 33762

This SDS document is written and published by Proto Corporation to conform to OSHA standard CFR29 1910 and conforms to GHS guidelines.

The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State, Provincial or local laws.

Issue Date: 7/22/2022

CHARLOTTE PIPE AND FOUNDRY COMPANY

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

COMMON NAME:	PVC Pipe and Fittings
CHEMICAL NAME:	Not Applicable. Formulation, see section 3.
FORMULA:	Mixture
PRODUCT CAS NO.:	Mixture, see Section 3.
Recommended Use:	Drain Waste Vent and Pressure Pipe and Fittings
SUPPLIER:	Charlotte Pipe and Foundry Company (Plastics Division)
ADDRESS:	4210 Old Charlotte Highway
CITY, STATE, ZIP:	Monroe, NC 28110
PHONE:	+1-704-372-3650 **EMERGENCY PHONE:** +1-704-372-3650

2. HAZARDS IDENTIFICATION

GHS Status	This material is hazardous in accordance with the hazard communication standard, 29 CFR 1910.1200
Classification of the substance or mixture	Skin irritation – Category 2 Eye irritation – Category 2A Carcinogenicity – Category 2B Specific target organ toxicity – single exposure – Category 3
GHS label pictogram	Warning
Signal word	Warning

CHARLOTTE PIPE AND FOUNDRY COMPANY

SAFETY DATA SHEET

Hazard statements	Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation. Suspected of causing cancer. Route of exposure: inhalation of airborne unbound particles of respirable size.
Precautionary statements Prevention	Avoid breathing dust/fume/gas/mist. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective respiratory protection.
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention.
Storage	Keep away from intense heat, flames. Store locked up.
Disposal	Dispose of in accordance with local regulations.
Hazards not otherwise classified	None known.
Relevant routes of exposure	Skin, eyes, inhalation.
Inhalation	Melted product is flammable and produces intense heat and dense smoke during burning. Irritating gases and fumes may be given off during burning or thermal decomposition. Inhalation of airborne unbound particles of respirable size may cause cancer.
Skin contact	Gases and fumes evolved during thermal processing or decomposition can cause skin irritation.
Eye contact	Dust can cause eye irritation. Gases and fumes evolved during thermal processing or decomposition can cause eye irritation.
Ingestion	No data available.

3. HAZARDOUS INGREDIENTS: COMPOSITION/INFORMATION

INGREDIENT	CAS NUMBER	% WEIGHT
Polyvinyl chloride	9002-86-2	> 80%
Titanium dioxide	13463-67-7	0-5%

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Consult a physician.

SKIN CONTACT: Rinse with water. Remove contaminated clothing and shoes. In the event of any complaints or symptoms,

avoid further exposure. Wash clothing before reuse. Clean shoes before reuse.

INHALATION: If vapors from excessive heating, burning or decomposition products are inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to- mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing, such as collar, tie, belt, or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance.

INGESTION: Wash out mouth with water. Remove dentures, if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Loosen tight clothing, such as collar, tie, belt, or waistband. Consult a physician.

Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under surveillance for 48 hours.

Specific treatments: None known.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASH POINT: No data.
Decomposition products may be combustible.
FLAMMABLE LIMITS:
LEL: No data
UEL: No data

EXTINGUISHING MEDIA: Water, foam, dry chemical. Do not use CO_2 on Class A fires, as a lack of cooling capacity may result in re-ignition.

FIRE AND EXPLOSION HAZARDS: Solid does not readily release flammable vapors. Thermoplastic polymers can burn. Smoke, Carbon Monoxide, Carbon Dioxide, Aldehydes, Hydrogen Chloride, Tin. Irritating and/or toxic substances will be emitted during burning, combustion, or decomposition. Run-off water from firefighting may have corrosive effects.

PROTECTIVE MEASURES FOR FIRE FIGHTERS: Firefighters must wear a NIOSH-approved, full-facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear with additional chemical protective clothing as necessary to protect against thermal decomposition products.

SPECIAL PROTECTIVE ACTIONS FOR FIRE FIGHTERS: If there is a fire, promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training.

6. ACCIDENTAL RELEASE MEASURES

EMERGENCY OVERVIEW

Toxic and irritating gases and fumes may be given off during burning or thermal decomposition. Avoid generating dust. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

Personal precautions, protective equipment, and emergency measures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with decomposition products or fumes from burning or excessive heating, take note of information in Section 8 on suitable and unsuitable materials. See also information in "for non-emergency personnel."
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

Methods and materials for containment and cleanup

Small spill	Avoid dust generation. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. See Section 1 for emergency contact information.
Large spill	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, waterways, basements, and confined areas. Avoid dust generation. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. See Section 1 for emergency contact information.

7. HANDLING AND STORAGE

Conditions for safe storage, including any incompatibilities	Store in a dry place away from direct sunlight, heat, and incompatible materials. Avoid intense heat and flames.

Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8). Do not handle until all safety precautions have been read and understood. Do not get particles, vapors or fumes in eyes, on skin, or on clothing. Do not ingest. If during normal use, the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.
Advice on general occupational hygiene	Employees must wash hands and face before eating, drinking, or smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT	CAS NUMBER	% WEIGHT	PEL-OSHA	TLV-ACGIH	NIOSH REL
Polyvinyl chloride	9002-86-2	> 80%	None established Particulates not otherwise classified: 15 mg/m^3	1 mg/m^3 (respirable fraction) Particulates not otherwise classified: 10 mg/m^3 (inhalable fraction)	None established
Titanium dioxide	13463-67-7	0-5%	15 mg/m^3, total dust	10 mg/m^3 TWA	None established

ENGINEERING CONTROLS: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below recommended and statutory limits.

RESPIRATORY PROTECTION: Cutting or sanding this product can generate dust. Used a properly fitted particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and the safe working limits of the respirator. A NIOSH-approved N95 single use or P95 multiple use respirator will protect the employee from at least 95% of airborne particles. Follow the respirator manufacturer's instructions for proper use. If adhesives or other substances are used with this product, refer to the product manufacturer's safety data sheet for applicable respiratory protective measures.

SKIN PROTECTION: Chemical-resistant, impervious gloves complying with an approved standard should be worn when handling this or any chemical product, if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted tha the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures containing several substances, the protection time of the gloves cannot be accurately estimated. If adhesives or other substances are used with this product, refer to the product manufacturer's safety data sheet for applicable skin protective measures.

BODY PROTECTION: Personal protective equipment for the body should be selected on the task being performed and the risks involved, and should be approved by a specialist before handling this product. If adhesives or other substances are used with this product, refer to the product manufacturer's safety data sheet for applicable skin protective measures.

EYE/FACE PROTECTION: Safety eyewear complying with an approved standard must be used when a risk assessment indicates this is necessary to avoid exposure to dust. Particulates and dust can be formed when cutting, grinding or sanding this product. If contact with dust or particulates is possible, the following should be worn unless the assessment indicates a higher degree of protection: safety glasses with side shields. If adhesives or other substances are used with this product refer to the product manufacturer's safety data sheet for applicable eye and face protective measures.

CHARLOTTE PIPE AND FOUNDRY COMPANY

SAFETY DATA SHEET

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Solid. White/grey.
ODOR:	Not applicable
ODOR THRESHOLD:	Not available
BOILING POINT:	Not available
FLASH POINT:	Not applicable
FLAMMABILITY:	Melted product is flammable.
AUTOIGNITION TEMPERATURE:	Not applicable
DECOMPOSITION TEMPERATURE:	Not available
LOWER/UPPER EXPLOSION LIMITS:	Not available
VAPOR PRESSURE:	Not available
LIQUID DENSITY:	Not available
SPECIFIC GRAVITY:	Approximately 1.4
MELTING POINT:	Not available
pH:	Not available
SOLUBILITY:	Insoluble
% VOLATILE:	Not available
VISCOSITY:	Not available

10. STABILITY AND REACTIVITY

Stability:	Stable at normal temperatures and pressures.
Reactivity:	Stable at normal temperatures and pressures.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.
Incompatible materials/conditions:	Consult the Charlotte Pipe and Foundry chemical resistance guide.
Hazardous decomposition products:	Hydrogen chloride, carbon oxides, small amounts of benzene and aromatic and aliphatic hydrocarbons, phosgene.
Hazardous polymerization:	Not available.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: No toxicological data is available for the finished product.
SENSITIZATION: No data available.
MUTAGENICITY: No data available.
DEVELEPMENTAL: No data available.

FERTILITY: No data available.

CARCINOGENICITY: Airborne unbound titanium dioxide particles of respirable size are classified by the International Agency for Research on Cancer (IARC) as 2B, possibly carcinogenic to humans. This product does not contain ingredients classified by the National Toxicology Program Report or OSHA at 29 CFR 1910, Subpart Z, as a carcinogen.

REPRODUCTIVE TOXICITY: Not available

TERATOGENICITY: Not available

SPECIFIC TARGET ORGANS – SINGLE EXPOSURE: Not available

SPECIFIC TARGET ORGANS – REPEATED EXPOSURE: Not available

ASPIRATION HAZARD: Not available

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE:

Potential acute health effects

Eye contact	No known significant effects or critical hazards. Dust can cause eye irritation.
Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	Skin irritant.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact	No data available.
Inhalation	No data available.
Skin contact	Adverse symptoms may include irritation.
Ingestion	No data available.

Immediate, delayed and chronic effects from short term exposure

Short term exposure

Potential immediate effects	No data available.
Potential delayed effects	No data available.

Long term exposure

Potential immediate effects	No data available.
Potential delayed effects	No data available.

Potential chronic effects

General	No data available.
Carcinogenicity	Airborne unbound titanium dioxide particles of respirable size are classified as IARC 2B, possibly carcinogenic to humans. On the date of preparation of this SDS, this product did not contain ingredients listed by OSHA or NTP. See Section 11.

12. ECOLOGICAL INFORMATION

Numerical measures of toxicity No data available

Persistence and degradability
Does not biodegrade over time.

Bioaccumulative potential
No data available

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Mobility in soil
No data available.

Other adverse effects: No known significant or critical hazards.

13. DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste should not be disposed of to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste and packaging should be recycled when possible. Incineration or landfill should only be considered when recycling is not feasible. This material must be disposed of in a safe way.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME:	Not Regulated
HAZARD CLASS:	Not Regulated
IDENTIFICATION NUMBER:	Not Regulated
SHIPPING LABEL:	Not Regulated
PACKING GROUP:	Not Regulated

15. REGULATORY INFORMATION

United States

TSCA 8(b):
All ingredients are listed on the U.S. Toxic Substances Control Act inventory.

This product can expose you to chemicals including titanium dioxide, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

16. OTHER INFORMATION

Date of Preparation: 20 April 2020

Key to Acronyms:

CAS:	Chemical Abstracts Service
CFR:	Code of Federal Regulations
HEPA	High-Efficiency Particulate Air (filter)
IARC:	International Agency for Research on Cancer
LD_{50}:	Lethal dose to 50% of exposed laboratory animals
LC_{50}:	Lethal concentration to 50% of exposed laboratory animals
LEL:	Lower Explosive Limit
mg/l:	Milligrams per liter
NIOSH:	National Institute for Occupational Safety and Health (US)
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration (US)
PEL:	Permissible Exposure Limit
TSCA:	Toxic Substances Control Act
TLV:	Threshold Limit Value – American Conference of Governmental Industrial Hygienists (ACGIH)
TWA:	Time Weighted Average
UEL:	Upper Explosive Limit

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ug/m^3: Micrograms per cubic meter

DISCLAIMER

NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY OR OTHERWISE FOR THE MATERIALS AS REPRESENTED IN THIS SDS SHEET. Charlotte Pipe and Foundry assumes no liability whatsoever for the use of or reliance upon this information. The information and data contained in this SDS has been compiled from information believed to be accurate and is offered for your consideration, investigatio n and verification. Buyer assumes all risk of use, storage, handling and disposal of the product in compliance with applicable federal, state, and local laws and regulations.

SAFETY DATA SHEET

1. Identification

Product identifier	**PVC Regular Clear Cement**
Other means of identification	
Product code	1100E
Synonyms	Part Numbers: 31012, 31013, 31014, 31015, 31016, 31958, 31959, 31960, 31961
Recommended use	Joining PVC Pipes
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company Name	Oatey Co.
Address	4700 West 160th St. Cleveland, OH 44135
Telephone	216-267-7100
E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
Emergency First Aid	1-877-740-5015
Contact person	MSDS Coordinator

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1

OSHA defined hazards Not classified.

Label elements

Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Methyl ethyl ketone	78-93-3	25-40
Cyclohexanone	108-94-1	10-25
Furan, Tetrahydro-	109-99-9	10-25
Acetone	67-64-1	5-15
Polyvinyl chloride	9002-86-2	5-15

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Polyvinyl chloride (CAS 9002-86-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
		200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3
		25 ppm
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3
		250 ppm
	TWA	590 mg/m3
		200 ppm
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3
		300 ppm
	TWA	590 mg/m3
		200 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexanediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofuran	Urine	*
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Cyclohexanone (CAS 108-94-1) Skin designation applies.

US - Tennessee OELs: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 109-99-9) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection	Face shield is recommended. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Clear.
Odor	Solvent.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	-4.0 °F (-20.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.9 +/- 0.02
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	80 - 500 cP
Other information	
VOC (Weight %)	<510 g/l SCAQMD 1168/M316A

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral		
LD50	Rat	1540 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Cyclohexanone (CAS 108-94-1)	3 Not classifiable as to carcinogenicity to humans.
Polyvinyl chloride (CAS 9002-86-2)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Cyclohexanone (CAS 108-94-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Acetone (CAS 67-64-1)	-0.24
Cyclohexanone (CAS 108-94-1)	0.81
Furan, Tetrahydro- (CAS 109-99-9)	0.46
Methyl ethyl ketone (CAS 78-93-3)	0.29

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	T11, TP1, TP8, TP27
Packaging exceptions	150
Packaging non bulk	201
Packaging bulk	243

IATA

UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1133
UN proper shipping name	ADHESIVES
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer
	Central nervous system
	Liver
	Blood
	Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV
Methyl ethyl ketone (CAS 78-93-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

US state regulations

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)
Polyvinyl chloride (CAS 9002-86-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-27-2015

Revision date -

Version # 01

HMIS® ratings Health: 2
Flammability: 3
Physical hazard: 0

NFPA ratings

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

CUSTOM
TILE INSTALLATION SYSTEMS

Conforms to OSHA HazCom 2012 Standard and WHMIS 2015

SAFETY DATA SHEET

Section 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: RedGard® Waterproofing And Crack Prevention Membrane

Product Code: Not Available

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Product Use: Waterproofing Membrane

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEETS

Name/Address: Custom Building Products
Five Concourse Parkway, Suite 1900
Atlanta, GA 30328

Telephone Number: 1-(800)-272-8786

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Telephone Number: INFOTRAC 1-800-535-5053 (US and Canada)
INTERNATIONAL + 1-352-323-3500

Section 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL IN ACCORDANCE WITH PARAGRAPH (d) OF 29 CFR 1910.1200 (OSHA HAZCOM2012)

Skin Irritation	**Category 2**
Eye Irritation	**Category 2A**
Carcinogenicity	**Category 1A**

2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM2012

2.2a SIGNAL WORD:
DANGER!

2.2b HAZARD STATEMENTS
Causes skin irritation
Causes serious eye irritation
May cause cancer through inhalation of dust

2.2c HAZARD PICTOGRAMS

2.2d PRECAUTIONARY STATEMENTS

i. PREVENTION	Wash hands thoroughly after handling. Do not breathe dust/fume/vapors/spray. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear impervious gloves/protective clothing/eye protection/face protection.
ii. RESPONSE	If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center/doctor. If swallowed: Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.
iii. STORAGE	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
iv. DISPOSAL	Dispose of contents/containers in accordance with all local, state, provincial, and federal regulations.

2.3 ADDITIONAL INFORMATION

2.3a HNOC – HAZARDS NOT OTHERWISE CLASSIFIED
Not Applicable

2.3b UNKNOWN ACUTE TOXICITY
34.4% of the mixture consists of ingredient(s) of unknown acute toxicity.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Chemical Name	CAS Number	Weight %
Calcium Carbonate*	1317-65-3	15 – 40%**
Crystalline Silica, Quartz*	14808-60-7	0.1 – 1.0%**
Ammonium Hydroxide	1336-21-6	0.1 – 1.0%**

*Inhalation of particulates unlikely due to product's physical state.

**Means that the component will fall into one of the ranges specified due to batch-to-batch variability and to protect Confidential Business Information.

Section 4: FIRST-AID MEASURES

4.1 DESCRIPTION OF THE FIRST-AID MEASURES

ROUTES OF EXPOSURE	DESCRIPTION
Eye Contact:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get

medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED

ROUTES OF EXPOSURE	DESCRIPTION
Eye Contact:	Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Skin Contact:	May cause skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis.
Inhalation:	May cause respiratory tract irritation. This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a serious disabling and fatal lung disease.
Ingestion:	May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

4.3 INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Note to Physicians: Symptoms may not appear immediately.

Specific Treatments: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Section 5: FIRE-FIGHTING MEASURES

5.1 FLAMMABILITY

Flammability: Not Flammable/Not Combustible by WHMIS/OSHA HAZCOM2012 Criteria

5.2 EXTINGUISHING MEDIA

5.2a. Suitable Extinguishing Media:
Treat for surrounding material.

5.2b. Unsuitable Extinguishing Media:
Not Available

5.3 SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

5.3a. Products of Combustion:
May include, and are not limited to: oxides of carbon

5.3b. Explosion Data

i. **Sensitivity to Mechanical Impact:**
Not Available

ii. **Sensitivity to Static Discharge:**
Not Available

5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS

Keep upwind of fire. Wear full fire fighting turn-out gear(full bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Methods for Containment:	Prevent further leakage or spillage if safe to do so. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for Cleaning-Up:	Pick up and transfer to properly labeled containers. Dispose of contents/containers in accordance with all local, state, provincial, and federal regulations.

Section 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handling:	Use in well-ventilated areas. Wear impervious gloves, such as nitrile and eye protection. Do not mix with other chemical products, except as indicated by the manufacturers. Do not get in eyes. Do not get on skin or clothing. Do not breathe dust/fume/vapors/spray. Do not take internally. Good housekeeping is important to prevent accumulation of dust.
General Hygiene Advice:	Use good industrial hygiene practices and wear recommended personal protection. Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage:	Keep out of the reach of children. Keep container tightly closed.

Store locked up. Store at room temperature and keep containers closed when not in use. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Keep dry until use.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETER
Exposure Guidelines

Occupational Exposure Limits		
Chemical Name	**OSHA-PEL**	**ACGIH-TLV**
Calcium Carbonate*	5 mg/m³ (Resp.) 15 mg/m³ (Total)	5 mg/m³ (Resp.)
Crystalline Silica, Quartz*	0.05 mg/m³	0.025 mg/m³ (Resp.)
Ammonium Hydroxide	50 ppm (35 mg/m³)	17 mg/m³

*Inhalation of particulates unlikely due to product's physical state.

8.2 EXPOSURE CONTROLS

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

8.3 INDIVIDUAL PROTECTION MEASURES

8.3a. Personal Protective Equipment:

i. **Eye/Face Protection:** Wear approved eye protection [properly fitted dust- or splash-proof chemical safety goggles/face (face shield)]

ii.Skin Protection:

1. **Hand Protection:** Wear impervious gloves, such as nitrile.
2. **Body Protection:** Wear suitable protective clothing.

iii. **Respiratory Protection:** A NIOSH approved respirator or filtering face piece, such as N95, is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

iv. **General Health and Safety Measures:** Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.):	Red Liquid
Odor:	Not Available
Odor Threshold:	Not Available

pH:	8.5 – 9.5
Melting point/Freezing point:	Not Available
Initial boiling point and boiling range:	Not Available
Flash point:	Not Available
Evaporation rate (Water=1):	Not Available
Flammability:	Not Flammable/Not Combustible
Upper Flammability/Explosive Limit:	Not Available
Lower Flammability/Explosive Limit:	Not Available
Vapor Pressure	Not Available
Vapor Density:	Not Available
Relative Density:	1.20 – 1.40 g/mL
Solubility in Water:	Slightly Soluble
Partition coefficient: n-octanol/water:	Not Available
Auto-ignition temperature:	Not Available
Decomposition Temperature:	Not Available
Viscosity (cps):	Not Available
VOC Content:	<5 g/L

Section 10: STABILITY AND REACTIVITY

10.1. REACTIVITY
No dangerous reaction known under conditions of normal use.

10.2. CHEMICAL STABILITY
Stable under normal storage conditions. Keep dry in storage.

10.3. POSSIBILITY OF HAZARDOUS REACTION
No dangerous reaction known under conditions of normal use.

10.4. CONDITIONS TO AVOID
Heat. Incompatible materials.

10.5. INCOMPATIBLE MATERIALS
Strong acids. Strong oxidizers.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS
Upon decomposition, this product may yield oxides of carbon.

Section 11: TOXICOLOGICAL INFORMATION

11.1. LIKELY ROUTES OF EXPOSURE:
Skin contact, skin absorption, eye contact, inhalation, and ingestion.

11.2. SYMPTOMS RELATED TO PHYSICAL/CHEMICAL/TOXICOLOGICAL CHARACTERISTICS:

Eye Contact: Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin Contact: Causes skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis.

Inhalation: May cause respiratory tract irritation. This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a serious disabling and fatal lung disease.

Ingestion: May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

Acute Toxicity(ATE_{mix}= 10,421 mg/kg)		
Chemical Name	**LC50**	**LD50**
Calcium Carbonate	Not Available	Oral: >6,450 mg/kg, rat
Crystalline Silica, Quartz	Not Available	Oral: >10,000 mg/kg, rat
Ammonium Hydroxide	Not Available	Oral: 350 mg/kg, rat

Carcinogenicity	
Chemical Name	**Chemical Listed as Carcinogens or Potential Carcinogen (NTP,IARC,OSHA,ACGIH,CP65)**
Calcium Carbonate	Not Listed
Crystalline Silica, Quartz	N-2, I-1, O-1, ACGIH-A2, CP65
Ammonium Hydroxide	Not Listed

11.3. DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT AND LONG-TERM EXPOSURE

SHORT-TERM	
Skin Corrosion/Irritation:	Causes skin irritation
Serious Eye Damage/Irritation:	Causes serious eye irritation
Respiratory Sensitization:	Not Classified
Skin Sensitization:	Not Classified
STOT-Single Exposure:	May cause respiratory irritation
Aspiration Hazard:	Not Classified
LONG-TERM	
Carcinogenicity:	May cause cancer through inhalation of dust
Germ Cell Mutagenicity:	Not Classified
Reproductive Toxicity:	Not Classified
STOT-Repeated Exposure:	Not Classified
Synergistic/Antagonistic Effects:	Not Classified

Section 12: ECOLOGICAL INFORMATION

12.1. ECOTOXICITY

May cause long-term adverse effects to the aquatic environment. Keep from entry into sewers and waterways.

Ecotoxicity		
Chemical Name	**EC50/NOEC-48 Hours**	**LC50/NOEC-96 Hours**
Calcium Carbonate	Not Available	Not Available
Crystalline Silica, Quartz	Not Available	Not Available
Ammonium Hydroxide	<10 mg/L, Ceriodaphnia dubia	17 mg/L, Pimephales promelas, 24h

12.2. PERSISTENCE AND DEGRADABILITY
Not Available

12.3. BIOACCUMULATIVE POTENTIAL
Not Available

12.4. MOBILITY IN SOIL
Not Available

12.5. OTHER ADVERSE EFFECTS
Not Available

Section 13: DISPOSAL CONSIDERATIONS

13.1. DISPOSAL METHOD
Dispose of contents/containers in accordance with all local, state, provincial, and federal regulations

13.2. OTHER DISPOSAL CONSIDERATIONS
Not Available

Section 14: TRANSPORT INFORMATION

DOT (U.S.)	TDG (CANADA)	IATA
UN NUMBER: Not Regulated	**UN NUMBER:** Not Regulated	**UN NUMBER:** Not Regulated
UN PROPER SHIPPING NAME: Not Regulated	**UN PROPER SHIPPING NAME:** Not Regulated	**UN PROPER SHIPPING NAME:** Not Regulated
TRANSPORT HAZARD CLASS (ES): Not Regulated	**TRANSPORT HAZARD CLASS (ES):** Not Regulated	**TRANSPORT HAZARD CLASS (ES):** Not Regulated
PACKING GROUP (if applicable): Not Regulated	**PACKING GROUP (if applicable):** Not Regulated	**PACKING GROUP (if applicable):** Not Regulated

SUMMARY: Product is NOT regulated under DOT/TDG and other transportation regulations.

14.1. ENVIRONMENTAL HAZARDS
Not Available

14.2. TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE
Not Available

14.3. SPECIAL PRECAUTIONS FOR USER
Do not handle until all safety precautions have been read and understood.

Section 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATIONS SPECIFIC FOR THE CHEMICAL

Canada: This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

US: SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

15.2. US FEDERAL INFORMATION:

CHEMICAL NAME	SARA TITLE III			
	SECTION 302 (EHS) TPQ (LBS)	SECTION 304 EHS RQ (LBS)	CERCLA RQ (LBS)	SECTION 313 (TRI)
Calcium Carbonate	Not Listed	Not Listed	Not Listed	Not Listed
Crystalline Silica, Quartz	Not Listed	Not Listed	Not Listed	Not Listed
Ammonium Hydroxide	Not Listed	Not Listed	1000 lbs	Listed

15.3. US STATE RIGHT TO KNOW LAWS:

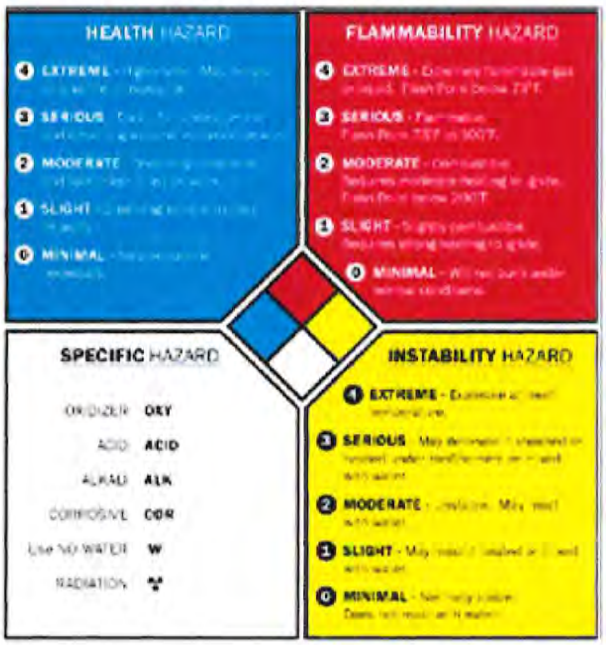
California Proposition 65:	⚠**WARNING:** This product can expose you to chemicals including crystalline silica, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov
Other U.S. States "Right to Know" Lists:	Water: **CAS#7732-18-5** Calcium Carbonate: **CAS#1317-65-3** Latex Dispersion: **CAS#N/A** Crystalline Silica, Quartz: **CAS#14808-60-7** Ammonium Hydroxide: **CAS#1336-21-6**

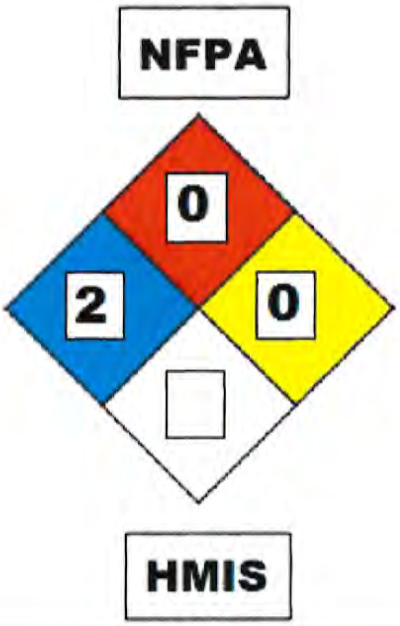
15.4. GLOBAL INVENTORIES

Chemical Name	USA TSCA	Canada DSL/NDSL
Calcium Carbonate	Yes	NDSL
Crystalline Silica, Quartz	Yes	DSL
Ammonium Hydroxide	Yes	DSL

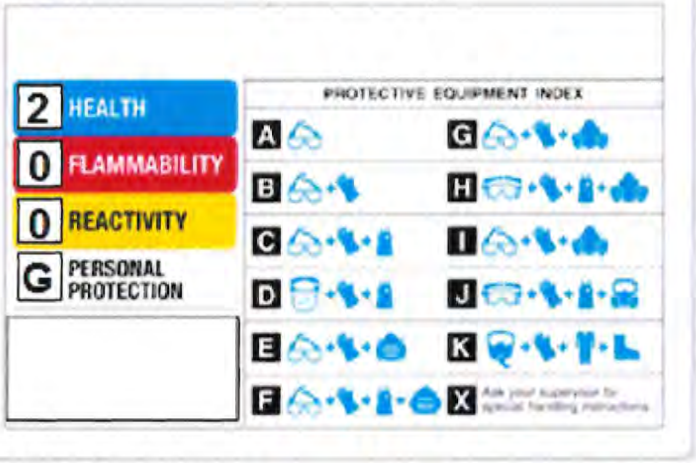
SAFETY DATA SHEET

15.5. NFPA AND HMIS RATINGS:





Hazard Index	
4	Severe Hazard
3	Serious Hazard
2	Moderate Hazard
1	Slight Hazard



15.6. SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

CP65	California Proposition 65
OSHA (O)	Occupational Safety and Health Administration
ACGIH (G)	American Conference of Governmental Industrial Hygienists • A1 – Confirmed human carcinogen • A2 – Suspected human carcinogen • A3 – Animal carcinogen • A4 – Not classifiable as a human carcinogen • A5 – Not suspected a human carcinogen
IARC (I)	International Agency for Research on Cancer • 1 – The agent (mixture) is carcinogenic to humans • 2A – The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

	• 2B – The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals. • 3 – The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans. • 4 – The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.
NTP (N)	National Toxicology Program • 1 – Known to be carcinogens • 2 – Reasonably anticipated to be carcinogens

Section 16: OTHER INFORMATION

Date of Preparation: September 3, 2014

Version: 3.3

Revision Date: November 17, 2020

Disclaimer: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by: Custom Building Products
Phone: (800)-272-8786
www.custombuildingproducts.com

End of Safety Data Sheet

SAFETY DATA SHEET

1. Identification

Product identifier	**Regular Clear Advanced PVC Cement**
Other means of identification	
Product code	1107E
Synonyms	Part Numbers: 30881, 31925, 31926, 31927, 31928, 31929, 31958, 31959, 31960, 31961
Recommended use	Joining PVC Pipes
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name	Oatey Co.
Address	4700 West 160th St. Cleveland, OH 44135
Telephone	216-267-7100
E-mail	info@oatey.com
Transport Emergency	Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)
Emergency First Aid	1-877-740-5015
Contact person	MSDS Coordinator

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1

OSHA defined hazards Not classified.

Label elements

Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness.

Precautionary statement

Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May form explosive peroxides. Contains a chemical classified by the US EPA as a suspected possible carcinogen.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Methyl ethyl ketone	78-93-3	30-45
Cyclohexanone	108-94-1	10-25
Furan, Tetrahydro-	109-99-9	10-25
Acetone	67-64-1	5-15
Polyvinyl chloride	9002-86-2	5-15

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Highly flammable liquid and vapor. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Vapors may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Polyvinyl chloride (CAS 9002-86-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Acetone (CAS 67-64-1)	PEL	2400 mg/m3	
		1000 ppm	
Cyclohexanone (CAS 108-94-1)	PEL	200 mg/m3	
		50 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	PEL	590 mg/m3	
		200 ppm	
Methyl ethyl ketone (CAS 78-93-3)	PEL	590 mg/m3	
		200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Acetone (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
Cyclohexanone (CAS 108-94-1)	STEL	50 ppm	
	TWA	20 ppm	
Furan, Tetrahydro- (CAS 109-99-9)	STEL	100 ppm	
	TWA	50 ppm	
Methyl ethyl ketone (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
Polyvinyl chloride (CAS 9002-86-2)	TWA	1 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3
		250 ppm
Cyclohexanone (CAS 108-94-1)	TWA	100 mg/m3
		25 ppm
Furan, Tetrahydro- (CAS 109-99-9)	STEL	735 mg/m3
		250 ppm
	TWA	590 mg/m3
		200 ppm
Methyl ethyl ketone (CAS 78-93-3)	STEL	885 mg/m3
		300 ppm
	TWA	590 mg/m3
		200 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
Cyclohexanone (CAS 108-94-1)	80 mg/l	1,2-Cyclohexanediol, with hydrolysis	Urine	*
	8 mg/l	Cyclohexanol, with hydrolysis	Urine	*
Furan, Tetrahydro- (CAS 109-99-9)	2 mg/l	Tetrahydrofuran	Urine	*
Methyl ethyl ketone (CAS 78-93-3)	2 mg/l	MEK	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Cyclohexanone (CAS 108-94-1) Skin designation applies.

US - Tennessee OELs: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.
Furan, Tetrahydro- (CAS 109-99-9) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Cyclohexanone (CAS 108-94-1) Can be absorbed through the skin.

Appropriate engineering controls	Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection	Face shield is recommended. Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Translucent liquid.
Color	Clear.
Odor	Solvent.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	151 °F (66.11 °C)
Flash point	-4.0 °F (-20.0 °C)
Evaporation rate	5.5 - 8
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.8
Flammability limit - upper (%)	11.8
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	145 mm Hg @ 20 C
Vapor density	2.5
Relative density	0.9 +/- 0.02
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	80 - 500 cP
Other information	
VOC (Weight %)	< 510 g/l SCAQMD 1168/M316A

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Ammonia. Amines. Isocyanates. Caustics.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May be fatal if swallowed and enters airways. Headache. Nausea, vomiting. May cause irritation to the respiratory system. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	May be fatal if swallowed and enters airways. Harmful if swallowed. Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	20 ml/kg
Inhalation		
LC50	Rat	50 mg/l, 8 Hours
Oral		
LD50	Rat	5800 mg/kg
Cyclohexanone (CAS 108-94-1)		
Acute		
Dermal		
LD50	Rabbit	948 mg/kg
Inhalation		
LC50	Rat	8000 ppm, 4 hours
Oral		
LD50	Rat	1540 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Cyclohexanone (CAS 108-94-1)	3 Not classifiable as to carcinogenicity to humans.
Polyvinyl chloride (CAS 9002-86-2)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Narcotic effects. May cause drowsiness and dizziness. Respiratory tract irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Acetone (CAS 67-64-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Cyclohexanone (CAS 108-94-1)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	481 - 578 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Acetone (CAS 67-64-1)	-0.24
Cyclohexanone (CAS 108-94-1)	0.81
Furan, Tetrahydro- (CAS 109-99-9)	0.46
Methyl ethyl ketone (CAS 78-93-3)	0.29

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	T11, TP1, TP8, TP27
Packaging exceptions	150
Packaging non bulk	201
Packaging bulk	243

IATA

UN number	UN1133
UN proper shipping name	Adhesives
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1133
UN proper shipping name	ADHESIVES
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-E, S-D
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Polyvinyl chloride (CAS 9002-86-2)	Cancer Central nervous system Liver Blood Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)	LISTED
Cyclohexanone (CAS 108-94-1)	LISTED
Furan, Tetrahydro- (CAS 109-99-9)	LISTED
Methyl ethyl ketone (CAS 78-93-3)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV
Methyl ethyl ketone (CAS 78-93-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532
Methyl ethyl ketone (CAS 78-93-3)	6714

US state regulations

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)
Polyvinyl chloride (CAS 9002-86-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
Cyclohexanone (CAS 108-94-1)
Furan, Tetrahydro- (CAS 109-99-9)
Methyl ethyl ketone (CAS 78-93-3)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-28-2015

Revision date -

Version # 01

HMIS® ratings Health: 2
Flammability: 3
Physical hazard: 0

NFPA ratings

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. Oatey Co. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name: ROHPER +LSPR 6PK GLOSS BLACK

Revision Date: 8/7/2023

Product Identifier: V2179838

Supercedes Date: 12/30/2020

Recommended Use: Topcoat / Aerosols

Supplier:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Rust-Oleum Canada (ROCA)
200 Confederation Parkway
Concord, ON L4K 4T8
Canada
Emergency Phone: 800-387-3625

Manufacturer:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Emergency Telephone: 24 Hour Hotline: 847-367-7700

2. Hazards Identification

Classification

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
27% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Carcinogenicity, category 1B	H350	May cause cancer.
Eye Irritation, category 2A	H319	Causes serious eye irritation.
Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Gases under Pressure; Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Germ Cell Mutagenicity, category 1B	H340	May cause genetic defects.
Reproductive Toxicity, category 1B	H360	May damage fertility or the unborn child.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
STOT, Repeated Exposure, category 1	H372	Causes damage to organs through prolonged or repeated exposure.
STOT, Single Exposure, category 3, NE	H336	May cause drowsiness or dizziness.

GHS LABEL PRECAUTIONARY STATEMENTS

P201	Obtain special instructions before use.

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fumes/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P317	Get medical help.
P319	Get medical help if you fell unwell.
P321	Specific treatment (see notice on this label).
P333+P317	If skin irritation or rash occurs: Get medical help.
P337+P317	If eye irritation persists: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.
P501	Dispose of contents and container in accordance with local, regional and national regulations.

GHS SDS PRECAUTIONARY STATEMENTS

P270	Do not eat, drink or smoke when using this product.

3. Composition / Information on Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Acetone	67-64-1	25-50	GHS02-GHS07	H225-319-332-336
Propane	74-98-6	10-25	GHS04	H280
n-Butyl Acetate	123-86-4	10-25	GHS02-GHS07	H226-336
n-Butane	106-97-8	2.5-10	GHS04	H280
Xylenes (o-, m-, p- Isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Propylene Glycol Monobutyl Ether	5131-66-8	2.5-10	GHS07	H302-315-319
Stoddard Solvent	8052-41-3	1.0-2.5	GHS08	H304-372
Ethylbenzene	100-41-4	0.1-1.0	GHS02-GHS07-GHS08	H225-304-332-373
Carbon Black	1333-86-4	0.1-1.0	Not Available	Not Available
Solvent Naphtha, Light Aromatic	64742-95-6	0.1-1.0	GHS07-GHS08	H304-332-340-350
Methyl Ethyl Ketoxime	96-29-7	0.1-1.0	GHS05-GHS06-GHS07-GHS08	H302+H312-315-317-318-331-336-350-370-373
Zirconium 2-Ethylhexanoate	22464-99-9	0.1-1.0	GHS07-GHS08	H315+H320-360
Cobalt 2-Ethylhexanoate	136-52-7	0.1-1.0	GHS08	H360
Naphtha, Hydrotreated Heavy	64742-48-9	0.1-1.0	GHS08	H304-340-350
Zirconium Acetate	5153-24-2	<0.1	Not Available	Not Available

4. First-Aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed. Remove contact lenses, if present and easy to do. Continue rinsing.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: If swallowed, do not induce vomiting. If victim is conscious and alert, give 2 to 4 cupfuls of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Treat symptomatically and supportively. Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-Fighting Measures

EXTINGUISHING MEDIA: Aqueous Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN -7°C (20°F). EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Water may be used to cool closed containers to prevent buildup of steam. Full protective equipment including self-contained breathing apparatus should be used. If water is used, fog nozzles are preferred. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

Special Fire and Explosion Hazard (Combustible Dust): No Information

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations. Do not incinerate closed containersContain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all SDS and label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120°F (49°C). Store large quantities in buildings designed and protected for storage of flammable aerosols. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

Advice on Safe Handling of Combustible Dust: No Information

8. Exposure Controls / Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	30.0	250 ppm	500 ppm	1000 ppm	N.E.
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	20.0	50 ppm	150 ppm	150 ppm	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.

Xylenes (o-, m-, p- Isomers)	1330-20-7	5.0	20 ppm	N.E.	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Stoddard Solvent	8052-41-3	5.0	100 ppm	N.E.	500 ppm	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	N.E.	100 ppm	N.E.
Carbon Black	1333-86-4	1.0	3 mg/m3	N.E.	3.5 mg/m3	N.E.
Solvent Naphtha, Light Aromatic	64742-95-6	1.0	N.E.	N.E.	N.E.	N.E.
Methyl Ethyl Ketoxime	96-29-7	1.0	10 ppm	N.E.	N.E.	N.E.
Zirconium 2-Ethylhexanoate	22464-99-9	1.0	5 mg/m3	10 mg/m3	5 mg/m3	N.E.
Cobalt 2-Ethylhexanoate	136-52-7	1.0	N.E.	N.E.	N.E.	N.E.
Naphtha, Hydrotreated Heavy	64742-48-9	1.0	N.E.	N.E.	N.E.	N.E.
Zirconium Acetate	5153-24-2	0.1	5 mg/m3	10 mg/m3	5 mg/m3	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

Engineering Measures for Combustible Dust: No Information

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Specific Gravity:	0.779	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/ water:**	N.D.
Decomposition Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 171	**Explosive Limits, vol%:**	1.0 - 13.0
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-Ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

Conditions to Avoid: Avoid temperatures above 120°F (49°C). Avoid all possible sources of ignition. Avoid excess heat. Keep from freezing.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

11. Toxicological Information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Irritating, and may injure eye tissue if not removed promptly. Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Low hazard for usual industrial handling or commercial handling by trained personnel.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
106-97-8	n-Butane	N.E.	N.E.	658 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- Isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
5131-66-8	Propylene Glycol Monobutyl Ether	1900 mg/kg Rat	>2000 mg/kg Rat	N.E.
8052-41-3	Stoddard Solvent	N.E.	>3000 mg/kg Rabbit	25
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
1333-86-4	Carbon Black	>15400 mg/kg Rat	N.E.	N.E.
64742-95-6	Solvent Naphtha, Light Aromatic	8400 mg/kg Rat	>2000 mg/kg Rabbit	N.E.
96-29-7	Methyl Ethyl Ketoxime	930 mg/kg Rat	1100 mg/kg Rabbit	>4.83 mg/L Rat
136-52-7	Cobalt 2-Ethylhexanoate	N.E.	>5000 mg/kg Rabbit	N.E.
64742-48-9	Naphtha, Hydrotreated Heavy	>6000 mg/kg Rat	>5000 mg/kg Rabbit	N.E.

N.E. - Not Established

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. No ecotoxicity data was found for this product.

13. Disposal Information

DISPOSAL: Do not incinerate closed containers. Dispose of material in accordance to local, state, and federal regulations and ordinances. This product as supplied is a US EPA defined ignitable hazardous waste. Dispose of unusable product as a hazardous waste (D001) in accordance with local, state, and federal regulation.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint and Related Spray Products in Ltd Qty	Aerosols	Aerosols, flammable	Aerosols
Hazard Class:	N.A.	2	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Gas under pressure, Carcinogenicity, Reproductive toxicity, Respiratory or Skin Sensitization, Serious eye damage or eye irritation, Specific target organ toxicity (single or repeated exposure), Germ cell mutagenicity

SARA Section 313

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- Isomers)	1330-20-7
Barite (Ba(SO4))	13462-86-7
Ethylbenzene	100-41-4
Cobalt 2-Ethylhexanoate	136-52-7

Toxic Substances Control Act

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

No TSCA 12(b) components exist in this product.

U.S. State Regulations:

California Proposition 65

WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

16. Other Information

HMIS RATINGS

Health:	2*	Flammability:	4	Physical Hazard:	0	Personal Protection:	X

NFPA RATINGS

Health:	2	Flammability:	4	Instability:	0

Maximum Incremental Reactivity: 0.92

SDS REVISION DATE: 8/7/2023

REASON FOR REVISION:

Product Composition Changed
Substance Hazard Threshold % Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
03 - Composition / Information on Ingredients
05 - Fire-Fighting Measures
08 - Exposure Controls / Personal Protection
11 - Toxicological Information
15 - Regulatory Information
16 - Other Information
Substance Hazardous Flag Changed
Revision Statement(s) Changed

Legend: N.A. - Not Applicable, N.D. - Not Determined, N.E. - Not Established

The manufacturer believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. The manufacturer makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

SAFETY DATA SHEET

K09202

Section 1. Identification

Product name : KRYLON® RUST TOUGH® Enamel (aerosol)
Gloss Black

Product code : K09202

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Paint or paint related material.

Manufacturer : Krylon Products Group
101 W. Prospect Avenue
Cleveland, OH 44115

Emergency telephone number of the company : US / Canada: (216) 566-2917
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Product Information Telephone Number : US / Canada: (800) 457-9566
Mexico: Not Available

Transportation Emergency Telephone Number : US / Canada: (216) 566-2917
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 1B
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 17% (oral), 17% (dermal), 20.3% (inhalation)

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.
May damage fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Pressurized container: Do not pierce or burn, even after use.

Response : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Acetone	≥25 - ≤50	67-64-1
Propane	≥10 - ≤25	74-98-6
Butane	≤10	106-97-8
n-Butyl Acetate	<10	123-86-4
2-Propoxyethanol	≤5	2807-30-9
2-methoxy-1-methylethyl acetate	≤3	108-65-6
Carbon Black	≤1	1333-86-4
Zirconium 2-Ethylhexanoate	≤0.3	22464-99-9
Methyl Ethyl Ketoxime	≤0.3	96-29-7
Light Aromatic Hydrocarbons	≤0.3	64742-95-6
trimethylbenzene	≤0.3	25551-13-7
Cobalt 2-Ethylhexanoate	≤0.3	136-52-7
Hydrotreated Heavy Petroleum Naphtha	≤0.3	64742-48-9

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Section 4. First aid measures

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Section 5. Fire-fighting measures

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Flammable aerosol.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	CAS #	Exposure limits
Acetone	67-64-1	**ACGIH TLV (United States, 1/2023).** TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. **NIOSH REL (United States, 10/2020).** TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.
Propane	74-98-6	**NIOSH REL (United States, 10/2020).** TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. **ACGIH TLV (United States, 1/2023). Oxygen Depletion [Asphyxiant]. Explosive potential.**
Butane	106-97-8	**NIOSH REL (United States, 10/2020).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **ACGIH TLV (United States, 1/2023).** **[Butane isomers] Explosive potential.** STEL: 1000 ppm 15 minutes.
n-Butyl Acetate	123-86-4	**NIOSH REL (United States, 10/2020).** TWA: 150 ppm 10 hours.

Section 8. Exposure controls/personal protection

		TWA: 710 mg/m³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m³ 15 minutes. **OSHA PEL (United States, 5/2018).** TWA: 150 ppm 8 hours. TWA: 710 mg/m³ 8 hours. **ACGIH TLV (United States, 1/2023). [Butyl acetates all isomers]** STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.
2-Propoxyethanol	2807-30-9	None.
2-methoxy-1-methylethyl acetate	108-65-6	**OARS WEEL (United States, 4/2022).** TWA: 50 ppm 8 hours.
Carbon Black	1333-86-4	**NIOSH REL (United States, 10/2020).** TWA: 3.5 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 3.5 mg/m³ 8 hours. **ACGIH TLV (United States, 1/2023).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction
Zirconium 2-Ethylhexanoate	22464-99-9	**ACGIH TLV (United States, 1/2023). [Zirconium and compounds as Zr]** TWA: 5 mg/m³, (as Zr) 8 hours. STEL: 10 mg/m³, (as Zr) 15 minutes. **NIOSH REL (United States, 10/2020). [zirconium compounds as Zr]** TWA: 5 mg/m³, (as Zr) 10 hours. STEL: 10 mg/m³, (as Zr) 15 minutes. **OSHA PEL (United States, 5/2018). [Zirconium compounds (as Zr)]** TWA: 5 mg/m³, (as Zr) 8 hours.
Methyl Ethyl Ketoxime	96-29-7	**OARS WEEL (United States, 4/2022). Skin sensitizer.** TWA: 10 ppm 8 hours.
Light Aromatic Hydrocarbons	64742-95-6	None.
trimethylbenzene	25551-13-7	**ACGIH TLV (United States, 1/2023). [trimethyl benzene, isomers]** TWA: 10 ppm 8 hours.
Cobalt 2-Ethylhexanoate	136-52-7	**ACGIH TLV (United States, 1/2023). [cobalt and inorganic compounds as Co] Skin sensitizer. Inhalation sensitizer.** TWA: 0.02 mg/m³, (as Co) 8 hours.
Hydrotreated Heavy Petroleum Naphtha	64742-48-9	None.

Occupational exposure limits (Canada)

Ingredient name	CAS #	Exposure limits
acetone	67-64-1	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 1200 mg/m³ 8 hours. 15 min OEL: 1800 mg/m³ 15 minutes. 8 hrs OEL: 500 ppm 8 hours. 15 min OEL: 750 ppm 15 minutes. **CA British Columbia Provincial (Canada, 6/2022).** TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. **CA Ontario Provincial (Canada, 6/2019).**

		TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. **CA Quebec Provincial (Canada, 6/2022).** TWAEV: 250 ppm 8 hours. STEV: 500 ppm 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 750 ppm 15 minutes. TWA: 500 ppm 8 hours.
Normal propane	74-98-6	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 1000 ppm 8 hours. **CA Quebec Provincial (Canada, 6/2022).** TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 6/2022). Oxygen Depletion [Asphyxiant]. Explosive potential.** **CA Ontario Provincial (Canada, 6/2019). Oxygen Depletion [Asphyxiant]. Explosive potential.**
Butane	106-97-8	**CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 1000 ppm 8 hours. **CA Quebec Provincial (Canada, 6/2022).** TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013). [Butane all isomers]** STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours. **CA British Columbia Provincial (Canada, 6/2022). [butane, all isomers] Explosive potential.** STEL: 1000 ppm 15 minutes. **CA Ontario Provincial (Canada, 6/2019). [Butane, All isomers] Explosive potential.** STEL: 1000 ppm 15 minutes.
n-butyl acetate	123-86-4	**CA Alberta Provincial (Canada, 6/2018).** 15 min OEL: 200 ppm 15 minutes. 15 min OEL: 950 mg/m³ 15 minutes. 8 hrs OEL: 150 ppm 8 hours. 8 hrs OEL: 713 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 200 ppm 15 minutes. TWA: 150 ppm 8 hours. **CA Ontario Provincial (Canada, 6/2019). [butyl acetates, all isomers]** STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours. **CA British Columbia Provincial (Canada, 6/2022). [butyl acetate, all isomers]** STEL: 150 ppm 15 minutes.

Section 8. Exposure controls/personal protection

		TWA: 50 ppm 8 hours. **CA Quebec Provincial (Canada, 6/2022). [butyl acetates (all isomers)]** STEV: 150 ppm 15 minutes. TWAEV: 50 ppm 8 hours.
2-Propoxyethanol	2807-30-9	**CA Ontario Provincial (Canada, 6/2019). Absorbed through skin.** TWA: 110 mg/m³ 8 hours. TWA: 25 ppm 8 hours.
Carbon black	1333-86-4	**CA British Columbia Provincial (Canada, 6/2022).** TWA: 3 mg/m³ 8 hours. Form: Inhalable **CA Ontario Provincial (Canada, 6/2019).** TWA: 3 mg/m³ 8 hours. Form: Inhalable particulate matter. **CA Quebec Provincial (Canada, 6/2022).** TWAEV: 3 mg/m³ 8 hours. Form: inhalable dust **CA Alberta Provincial (Canada, 6/2018).** 8 hrs OEL: 3.5 mg/m³ 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 7 mg/m³ 15 minutes. TWA: 3.5 mg/m³ 8 hours.
Zirconium 2-Ethylhexanoate	22464-99-9	**CA Alberta Provincial (Canada, 6/2018). [Zirconium and compounds as Zr]** 8 hrs OEL: 5 mg/m³, (as Zr) 8 hours. 15 min OEL: 10 mg/m³, (as Zr) 15 minutes. **CA British Columbia Provincial (Canada, 6/2022). [Zirconium and compounds as Zr]** TWA: 5 mg/m³, (as Zr) 8 hours. STEL: 10 mg/m³, (as Zr) 15 minutes. **CA Quebec Provincial (Canada, 6/2022). [Zirconium and compounds]** TWAEV: 5 mg/m³, (as Zr) 8 hours. STEV: 10 mg/m³, (as Zr) 15 minutes. **CA Ontario Provincial (Canada, 6/2019). [Zirconium and compounds as Z]** STEL: 10 mg/m³, (as Zr) 15 minutes. TWA: 5 mg/m³, (as Zr) 8 hours.
Methyl Ethyl Ketoxime	96-29-7	**OARS WEEL (United States, 4/2022). Skin sensitizer.** TWA: 10 ppm 8 hours.
Cobalt 2-Ethylhexanoate	136-52-7	**CA British Columbia Provincial (Canada, 6/2022). [cobalt and inorganic compounds as Co, Inhalable] Skin sensitizer. Inhalation sensitizer. Notes: No British Columbia exposure limit at this time** **CA British Columbia Provincial (Canada, 6/2022). [Cobalt and inorganic compounds as Co, Total] Skin sensitizer. Inhalation sensitizer.** TWA: 0.02 mg/m³, (as Co, Total) 8 hours. **CA Quebec Provincial (Canada, 6/2022). [Cobalt elemental, and inorganic compounds] Skin sensitizer. Inhalation**

Section 8. Exposure controls/personal protection

		sensitizer. TWAEV: 0.02 mg/m³, (as Co) 8 hours. **CA Ontario Provincial (Canada, 6/2019). [Cobalt and inorganic compounds as Co]** TWA: 0.02 mg/m³, (as Co) 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013). [Cobalt and inorganic compounds as Co]** STEL: 0.06 mg/m³, (measured as Co) 15 minutes. TWA: 0.02 mg/m³, (measured as Co) 8 hours.

Occupational exposure limits (Mexico)

	CAS #	Exposure limits
Acetone	67-64-1	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes.
n-Butyl Acetate	123-86-4	**NOM-010-STPS-2014 (Mexico, 4/2016).** TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes.
Zirconium 2-Ethylhexanoate	22464-99-9	**NOM-010-STPS-2014 (Mexico, 4/2016). [Zirconium compounds]** TWA: 5 mg/m³, (as Zr) 8 hours. STEL: 10 mg/m³, (as Zr) 15 minutes.
Cobalt 2-Ethylhexanoate	136-52-7	**NOM-010-STPS-2014 (Mexico, 4/2016). [Cobalt and inorganic compounds]** TWA: 0.02 mg/m³, (as Co) 8 hours.

Biological exposure indices (United States)

Ingredient name	Exposure indices
Acetone	**ACGIH BEI (United States, 1/2023)** BEI: 25 mg/l, acetone [in urine]. Sampling time: end of shift.
Cobalt 2-Ethylhexanoate	**ACGIH BEI (United States, 1/2023) [cobalt and inorganic compounds including cobalt oxides]** BEI: 15 µg/l, not combined with tungsten carbide - cobalt [in urine]. Sampling time: end of shift at end of workweek. BEI: Nonquantitative: Biological monitoring should be considered for this compound based on the review; however, a specific BEI® could not be determined due to insufficient data., cobalt with tungsten carbide - cobalt [in urine]. Sampling time: end of shift at end of workweek.

Biological exposure indices (Canada)

No exposure indices known.

Biological exposure indices (Mexico)

Section 8. Exposure controls/personal protection

Ingredient name	Exposure indices
Acetone	**Official Mexican STANDARD NOM-047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012)** BEI: 50 mg/L [non-specific.The determinant is nonspecific, since it can be found after exposure to other chemicals.], acetone [in urine]. Sampling time: at the end of the work shift.
Cobalt 2-Ethylhexanoate	**Official Mexican STANDARD NOM-047-SSA1-2011, Environmental Health-Biological exposure indices for personnel occupationally exposed to chemical substances. (Mexico, 6/2012) [cobalt and its compounds]** BEI: 1 µg/l [Basal level.The determinant may be present in the biological sample obtained from subjects who have not been occupationally exposed, at a concentration that could affect the interpretation of the results. These background levels are included in the valu; semi-quantitative.The biological determinant is an indicator of chemical exposure, but the quantitative interpretation of the measure is ambiguous. These biological determinants should be used as a screening test if a quantitative test is not possible.], cobalt [in blood]. Sampling time: at the end of the shift at the end of the work week. BEI: 15 µg/l [Basal level.The determinant may be present in the biological sample obtained from subjects who have not been occupationally exposed, at a concentration that could affect the interpretation of the results. These background levels are included in the valu], cobalt [in urine]. Sampling time: at the end of the shift at the end of the work week.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not available.

Boiling point, initial boiling point, and boiling range : Not available.

Flash point : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]

Evaporation rate : 5.6 (butyl acetate = 1)

Flammability : Flammable aerosol.

Lower and upper explosion limit/flammability limit : Lower: 1.26%
Upper: 15.8%

Vapor pressure : 101.3 kPa (760 mm Hg)

Relative vapor density : 1.55 [Air = 1]

Relative density : 0.75

Solubility(ies) :

Section 9. Physical and chemical properties

Media	Result
cold water	Not soluble

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (40°C (104°F)): <20.5 mm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 27.448 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m^3	4 hours
n-Butyl Acetate	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
2-Propoxyethanol	LD50 Oral	Rat	3089 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
Carbon Black	LD50 Oral	Rat	>15400 mg/kg	-
Zirconium 2-Ethylhexanoate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-
Light Aromatic Hydrocarbons	LD50 Oral	Rat	8400 mg/kg	-
trimethylbenzene	LD50 Oral	Rat	8970 mg/kg	-
Cobalt 2-Ethylhexanoate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	1.22 g/kg	-
Hydrotreated Heavy Petroleum Naphtha	LC50 Inhalation Vapor	Rat	8500 mg/m^3	4 hours

Section 11. Toxicological information

	LD50 Oral	Rat	>6 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Mild irritant	Rabbit	-	10 uL	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	395 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
n-Butyl Acetate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
2-Propoxyethanol	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 750 ug	-
	Skin - Mild irritant	Guinea pig	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	100 uL	-
Light Aromatic Hydrocarbons	Eyes - Mild irritant	Rabbit	-	24 hours 100 uL	-
trimethylbenzene	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Carbon Black	-	2B	-
Cobalt 2-Ethylhexanoate	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Acetone	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
n-Butyl Acetate	Category 3	-	Narcotic effects
2-Propoxyethanol	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
Methyl Ethyl Ketoxime	Category 1	-	upper respiratory tract
	Category 3		Narcotic effects
Light Aromatic Hydrocarbons	Category 3	-	Respiratory tract irritation
	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	-	-
2-Propoxyethanol	Category 2	-	-
Methyl Ethyl Ketoxime	Category 2	-	blood system
Light Aromatic Hydrocarbons	Category 2	-	-

Aspiration hazard

Name	Result
Light Aromatic Hydrocarbons	ASPIRATION HAZARD - Category 1
trimethylbenzene	ASPIRATION HAZARD - Category 1
Hydrotreated Heavy Petroleum Naphtha	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight

Section 11. Toxicological information

increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral Dermal	77455.31 mg/kg 27582.02 mg/kg

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - *Selenastrum sp.*	96 hours
	Acute EC50 23.5 mg/l Fresh water	Daphnia - *Daphnia magna*	48 hours
	Acute LC50 4.42589 ml/L Marine water	Crustaceans - *Acartia tonsa* - Copepodid	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - *Poecilia reticulata*	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - *Ulva pertusa*	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - *Daphniidae*	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - *Daphnia magna* - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - *Gasterosteus aculeatus* - Larvae	42 days
n-Butyl Acetate	Acute LC50 32 mg/l Marine water	Crustaceans - *Artemia salina*	48 hours
	Acute LC50 18000 µg/l Fresh water	Fish - *Pimephales promelas*	96 hours
Methyl Ethyl Ketoxime	Acute LC50 843000 µg/l Fresh water	Fish - *Pimephales promelas*	96 hours
trimethylbenzene	Acute LC50 5600 µg/l Marine water	Crustaceans - *Palaemonetes pugio*	48 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
n-Butyl Acetate	-	-	Readily
Light Aromatic Hydrocarbons	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Zirconium 2-Ethylhexanoate	-	2.96	Low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	Low
Light Aromatic Hydrocarbons	-	10 to 2500	High
Cobalt 2-Ethylhexanoate	-	15600	High
Hydrotreated Heavy Petroleum Naphtha	-	10 to 2500	High

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 15. Regulatory information

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

International lists : **Australia inventory (AIIC)**: Not determined.
China inventory (IECSC): Not determined.
Japan inventory (CSCL): Not determined.
Japan inventory (ISHL): Not determined.
Korea inventory (KECI): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.
Taiwan Chemical Substances Inventory (TCSI): Not determined.
Thailand inventory: Not determined.
Turkey inventory: Not determined.
Vietnam inventory: Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	On basis of test data
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 1B	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method

History

Date of printing : 1/21/2024

Date of issue/Date of revision : 1/21/2024

Date of previous issue : 12/31/2023

Version : 27.01

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

1. Identification

Product identifier: PFC500CLR

Other means of identification
Synonyms: Silicone Rubber Sealant

Recommended use and restriction on use
Recommended use: Silicone Elastomer
Restrictions on use: For industrial use only.

Manufacturer/Importer/Distributor Information	:	Momentive Amer Ind. 260 Hudson River Road Waterford NY 12188
Contact person	:	commercial.services@momentive.com
Telephone	:	General information +1-800-295-2392
Emergency telephone number **Supplier**	:	CHEMTREC 1-800-424-9300

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol:	No symbol
Signal Word:	No signal word.
Hazard Statement:	Not applicable
Precautionary Statements	Not applicable

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*	Notes
Silane, dichlorodimethyl-, reaction products with silica	68611-44-9	5 - <10%	# This substance has workplace exposure limit(s).
Distillates, petroleum, hydrotreated middle	64742-46-7	5 - <10%	# This substance has workplace exposure limit(s).

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: If swallowed, do NOT induce vomiting. Give a glass of water.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

Skin Contact: To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water. If skin irritation occurs: Get medical advice/attention.

Eye contact: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Treatment is symptomatic and supportive.

5. Fire-fighting measures

General Fire Hazards: Use standard firefighting procedures and consider the hazards of other involved materials.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Extinguish with foam, carbon dioxide or dry powder.
Unsuitable extinguishing media:	water jet
Specific hazards arising from the chemical:	In case of fire, carbon monoxide and carbon dioxide may be formed. Acute overexposure to the products of combustion may result in irritation of the respiratory tract. Pay attention to the corrosive effects arising from contact with water. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters:	Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Keep container closed. Avoid contact with eyes, skin, and clothing. Keep out of reach of children. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the finger and hands. Product releases acetic acid during application and curing.
Methods and material for containment and cleaning up:	Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

7. Handling and storage

Precautions for safe handling:	Sensitivity to static discharge is not expected. Acetic acid is formed during processing. Wear appropriate personal protective equipment. Use only in well-ventilated areas. Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Keep containers tightly closed. See Section 8 of the SDS for Personal Protective Equipment.
Conditions for safe storage, including any incompatibilities:	Keep away from heat, sparks and open flame.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Silane, dichlorodimethyl-, reaction products with silica	TWA	0.8 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
	TWA	20 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000), as amended (03 2016)
Distillates, petroleum, hydrotreated middle - Inhalable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values, as amended (03 2015)
Distillates, petroleum, hydrotreated middle - Mist.	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	STEL	10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards, as amended (2010)
	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000), as amended (02 2006)
	TWA	5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000), as amended (1989)
	TWA	5 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A, as amended (06 2008)
Distillates, petroleum, hydrotreated middle	ST ESL	3,500 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (11 2016)
	AN ESL	350 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality), as amended (11 2016)
Distillates, petroleum, hydrotreated middle - Mist.	TWA PEL	5 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants, as amended (01 2015)
Distillates, petroleum, hydrotreated middle	IDLH	2,500 mg/m3	US. NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended (10 2017)

Appropriate Engineering Controls Eye wash facilities and emergency shower must be available when handling this product. Use only in well-ventilated areas.

Individual protection measures, such as personal protective equipment

General information: General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment. Wear suitable gloves and eye/face protection.

Eye/face protection: Safety glasses with side shields Wear face shield if there is risk of splashes.

Skin Protection

Hand Protection: Use chemical-resistant, impervious gloves.

Other: Wear suitable protective clothing and eye/face protection.

Respiratory Protection:	If inhalation exposure is expected, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).
Hygiene measures:	Avoid contact with eyes, skin, and clothing. Ensure adequate ventilation, especially in confined areas. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. When using do not eat, drink or smoke.

9. Physical and chemical properties

Appearance

Physical state:	solid
Form:	Paste
Color:	Colorless
Odor:	Acetic acid.
Odor threshold:	No data available.
pH:	Not applicable
Melting point/freezing point:	Not applicable
Initial boiling point and boiling range:	Not applicable
Flash Point:	> 93.3 °C (estimated)
Evaporation rate:	< 1
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Heat of combustion:	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Density:	ca. 1.050 g/cm3
Relative density:	ca. 1.05
Solubility(ies)	
Solubility in water:	Insoluble
Solubility (other):	Soluble in toluene
Partition coefficient (n-octanol/water) Log Pow:	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
SADT:	No data available.

Viscosity, dynamic:	No data available.
Viscosity, kinematic:	> 7 mm2/s (40 °C)
VOC:	36 g/l ;

10. Stability and reactivity

Reactivity:	No dangerous reaction if used as recommended.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	None known.
Incompatible Materials:	None known.
Hazardous Decomposition Products:	Carbon dioxide Silicon dioxide. Acetic acid. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	No data available.
Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion:	No data available.
Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:

ATEmix : 6,106.61 mg/kg

Dermal
Product: Not classified for acute toxicity based on available data.

Inhalation
Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Silane, dichlorodimethyl-, reaction products with silica	No data available.
Distillates, petroleum, hydrotreated middle	No data available.

Other adverse effects: No data available.

13. Disposal considerations

General information: The generation of waste should be avoided or minimized wherever possible. See Section 8 for information on appropriate personal protective equipment. Do not discharge into drains, water courses or onto the ground.

Disposal instructions: Disposal should be made in accordance with federal, state and local regulations.

Contaminated Packaging: Dispose of as unused product.

14. Transport information

DOT
Not regulated.

IMDG
Not regulated.

IATA
Not regulated.

Special precautions for user: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

Chemical Identity	OSHA hazard(s)
Dimethylpolysiloxane	No OSHA Hazards
Silane, dichlorodimethyl-, reaction products with silica	No OSHA Hazards
Distillates, petroleum, hydrotreated middle	Causes mild skin irritation.; Systemic effects

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Not classified

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

Dimethylpolysiloxane

Silane, dichlorodimethyl-, reaction products with silica

Distillates, petroleum, hydrotreated middle

Methyltriacetoxysilane

METHYLDIACETOXYISOPROPOXYSILANE

US. Massachusetts RTK - Substance List

Chemical Identity

Distillates, petroleum, hydrotreated middle

10,10'-OXYBISPHENOXARSINE

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Distillates, petroleum, hydrotreated middle

US. Rhode Island RTK

Chemical Identity

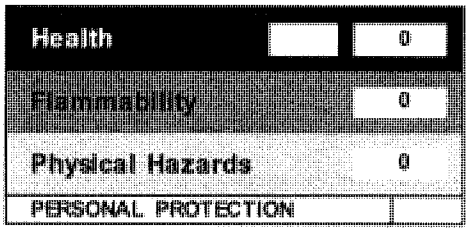
Distillates, petroleum, hydrotreated middle

Inventory Status:

Australia AICS:	On or in compliance with the inventory	Remarks: None.
Canada DSL Inventory List:	Q (quantity restricted)	Remarks: None.
Canada NDSL Inventory:	Not in compliance with the inventory.	Remarks: None.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory	Remarks: None.
Japan (ENCS) List:	On or in compliance with the inventory	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory	Remarks: None.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory	Remarks: None.
Philippines PICCS:	On or in compliance with the inventory	Remarks: None.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory	Remarks: None.
US TSCA Inventory:	On or in compliance with the inventory	Remarks: None.
EINECS, ELINCS or NLP:	On or in compliance with the inventory	Remarks: None.

16.Other information, including date of preparation or last revision

HMIS Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 08/03/2021

Revision Date: No data available.

Version #: 3.2

Further Information: No data available.

Disclaimer:

Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives.
Keep out of the reach of children.

Further Information

The information provided in this Safety Data Sheet is correct to the best ofour knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safehandling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET

Issue Date 13-Dec-2012 **Revision Date** 01-Oct-2017 **Version** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Silicone Sealant – Acetoxy Cure – Clear, White & Colors

Other Means of Identification

SDS # RD-0081

Product Code 0810, 0816, 0826 Series

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Silicone Sealant.

Details of the Supplier of the Safety Data Sheet

Supplier Address
Red Devil, Inc.
4175 Webb Street
Pryor, Oklahoma 74361
www.reddevil.com

Emergency Telephone Number

Company Phone Number 918-825-5744
Fax: 918-825-5761

Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 2

Signal Word
Warning

Hazard Statements
Causes skin irritation

Appearance Clear/opaque or colored paste **Physical State** Paste **Odor** Acetic Acid Odor (Vinegar odor)

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF ON SKIN: Wash with plenty of soap and water
If skin irritation persist: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Hazards Not Otherwise Classified (HNOC)
Not Applicable

Other Information
Not Applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Hydroxy-terminated Dimethyl siloxane	70131-67-8	>50
Non-hazardous ingredients *	Proprietary	>10
Amorphous silica (glass)	7631-86-9	<13
Polydimethylsiloxane	63148-62-9	<10
Methyltriacetoxysilane	4253-34-3	<6
Titanium Dioxide	13463-67-7	<5
Ethyltriacetoxysilane	17689-77-9	<6

* Unlisted ingredients are not considered hazardous under the OSHA GHS Hazard Communication Standard (29 CFR 1910.1200). (Methyltriacetoxysilane) Observe limits for acetic acid formed during curing on exposure to water or humid air. (Silica, amorphous; Titanium Dioxide) Inhalation of particulates unlikely due to product's physical state

4. FIRST AID MEASURES

First Aid Measures

General advice — Provide this SDS to medical personnel for treatment.

Inhalation — If symptoms are experienced remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.

Eye Contact — Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes while holding the eyelid(s) open. Obtain medical attention.

Ingestion — Rinse mouth thoroughly with water. If irritation or discomfort occurs, obtain medical advice.

Skin Contact — No health effects expected. If irritation does occur, flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advise.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms — Causes skin irritation. May cause nose, throat & respiratory tract irritation. Direct contact with eyes may cause temporary irritation.

Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physicians Treat according to person's condition & specifics of exposure.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Small Fire Use carbon dioxide (CO2), dry chemical or water spray.

Large Fire Use dry chemical, foam or water spray.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Not determined.

Hazardous combustion products Carbon oxides & traces of incompletely burned carbon compounds. Silicon dioxide. Formaldehyde.

Protective Equipment and Precautions for Firefighters
Self-contained breathing apparatus & protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Observe all personal protection equipment recommendations described in Sections 5 & 8.

Environmental Precautions See Section 12 for additional ecological information.

Methods and Material for Containment and Cleaning Up

Methods for Containment Prevent further leakage or spillage if safe to do so. Use absorbent material to contain spill.

Methods for Cleaning Up Wipe up or scrape up & contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state & federal laws & regulations may apply to releases & disposal of this material as well as those materials & items employed in the cleanup of releases. You will need to determine which federal, state & local laws & regulations are applicable. Sections 13 & 15 of this MSDS provide information regarding certain federal & state requirements.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Wash face, hands, and any exposed skin thoroughly after handling. Use personal protection recommended in Section 8. Use only in well-ventilated areas. Avoid contact with skin and eyes. Product evolves acetic acid (HOAc) when exposed to water or humid air.

Conditions for Safe Storage, Including any Incompatibilities

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Amorphous silica (glass) 7631-86-9	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h
Polydimethylsiloxane 63148-62-9	> 17 g/kg (Rat)	> 2 g/kg (Rabbit)	-
Methyltriacetoxysilane 4253-34-3	= 2060 mg/kg (Rat)	-	-
Titanium Dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-

Information on Physical, Chemical and Toxicological Effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. Titanium dioxide is a possible carcinogen when it appears as a respirable dust.

Chemical Name	ACGIH	IARC	NTP	OSHA
Amorphous silica (glass) 7631-86-9		Group 3		
Titanium Dioxide 13463-67-7		Group 2B		X

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Group 3 IARC components are "not classifiable as human carcinogens"
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Numerical Measures of Toxicity- Product
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Amorphous silica (glass) 7631-86-9	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static		7600: 48 h Ceriodaphnia dubia mg/L EC50

Persistence and Degradability
Complete information is not yet available.

Bioaccumulation
Complete information is not yet available.

Mobility
Complete information is not yet available.

Other Adverse Effects Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note	Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances
DOT	Not regulated
IATA	Not regulated
IMDG	Not regulated

15. REGULATORY INFORMATION

International Inventories

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

US State Regulations

Chemical Name	California Proposition 65
Titanium Dioxide - 13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Amorphous silica (glass) 7631-86-9	X	X	X

Titanium Dioxide 13463-67-7	X	X	X

U.S. EPA Label Information

16. OTHER INFORMATION

NFPA	**Health Hazards** 1	**Flammability** 1	**Instability** 0	**Special Hazards** Not determined
HMIS	**Health Hazards** 1	**Flammability** 0	**Physical Hazards** 0	**Personal Protection** B- Safety Glasses, Gloves

Issue Date 13-Dec-2012
Revision Date 01-Oct-2017
Revision Note
New format

Disclaimer

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End of Safety Data Sheet

Safety Data Sheet

24 Hour Emergency Phone Numbers:

Medical/Poison Control:

In U.S.: Call 1-800-222-1222
Outside U.S.: Call your local poison control center

Transportation/National Response Center:

1-800-535-5053
1-352-323-3500

NOTE: The National ResponseCenter emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this SDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

1. Identification

This Material Safety Data Sheet is available in American Spanish upon request.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name: !00% Silicone Window & Door Clear

Product UPC Number: 08641

Product Use/Class: Caulking Compound

Manufacturer: DAP Products Inc.
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Preparer: Regulatory Department

Revision Date: 5/19/2015

Supercedes Date: No Information

SDS No: 00008687001

2. Hazards Identification

EMERGENCY OVERVIEW: Under normal use conditions, this product is not expected to cause adverse health effects. High concentration of vapors may cause irritation to eyes and respiratory system.

GHS Classification
Not a hazardous substance or mixture.

Symbol(s) of Product

Not a hazardous substance or mixture.

Signal Word
Not a hazardous substance or mixture.

3. Composition/Information on Ingredients

Chemical Name	CAS-No.	Wt. %	GHS Symbols	GHS Statements
Hydrotreated middle distillate	64742-46-7	10-25	GHS06	H331

Silica, amorphous	7631-86-9	2.5-10 GHS07	H332
Silanetriol, methyl-, triaceta	4253-34-3	2.5-10 GHS07	H302-312-315-319-332

The text for GHS Hazard Statements shown above (if any) is given in the "Other information" Section.

4. First-aid Measures

FIRST AID - INHALATION: Material is not likely to present an inhalation hazard at ambient conditions. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

FIRST AID - SKIN CONTACT: Wash skin with soap and water for 15 minutes. Get medical aid if symptoms persist.

FIRST AID - EYE CONTACT: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

FIRST AID - INGESTION: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

5. Fire-fighting Measures

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

SPECIAL FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

EXTINGUISHING MEDIA: Carbon Dioxide, Dry Chemical, Foam, Water Fog

6. Accidental Release Measures

ENVIRONMENTAL MEASURES: No Information

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Scrape up dried material and place into containers. Use personal protective equipment as necessary. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

7. Handling and Storage

HANDLING: KEEP OUT OF REACH OF CHILDREN!DO NOT TAKE INTERNALLY. Avoid breathing vapor and contact with eyes, skin and clothing. Use only with adequate ventilation. Ensure fresh air entry during application and drying. Wash thoroughly after handling. Remove contact lenses before using. Do not handle contact lenses until all sealant has been cleaned from fingertips, nails and cuticles. Residual sealant may transfer to contact lenses and cause severe eye irritation.

STORAGE: Avoid excessive heat and freezing. Do not store at temperatures above 120 degrees F. Store away from caustics and oxidizers.

8. Exposure Controls/Personal Protection

Ingredients with Occupational Exposure Limits

Chemical Name	ACGIH TLV-TWA	ACGIH-TLV STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Hydrotreated middle distillate	N.E.	N.E.	N.E.	N.E.
Silica, amorphous	N.E.	N.E.	N.E.	N.E.
Silanetriol, methyl-, triaceta	N.E.	N.E.	N.E.	N.E.

Further Advice: MEL = Maximum Exposure Limit OES = Occupational Exposure Standard SUP = Supplier's Recommendation Sk = Skin Sensitizer N.E. = Not Established

Personal Protection

RESPIRATORY PROTECTION: No personal respiratory protective equipment normally required.

SKIN PROTECTION: Wear nitrile or neoprene gloves.

EYE PROTECTION: Goggles or safety glasses with side shields.

OTHER PROTECTIVE EQUIPMENT: Not required under normal use.

HYGIENIC PRACTICES: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Appearance:	Clear	**Physical State:**	No Information
Odor:	Acetic Acid	**Odor Threshold:**	Not Established
Density, g/cm3:	0.96 - 0.96	**pH:**	Not Established
Freeze Point, °C:	Not Established	**Viscosity (mPa.s):**	Not Established
Solubility in Water:	Not Established	**Partition Coeff., n-octanol/water:**	Not Established
Decomposition Temperature, °C:	Not Established	**Explosive Limits, %:**	N.I. - N.I.
Boiling Range, °C:	N.I. - N.I.	**Auto-Ignition Temperature, °C**	Not Established
Minimum Flash Point, °C:	93.3	**Vapor Pressure, mmHg:**	No Information
Evaporation Rate:	Slower Than n-Butyl Acetate	**Flash Method:**	Seta Closed Cup
Vapor Density:	Heavier Than Air		
Combustibility:	Does not Support Combustion		

(See "Other information" Section for abbreviation legend)
(If product is an aerosol, the flash point stated above is that of the propellant.)

10. Stability and Reactivity

STABILITY: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Oxidizing agents. Excessive heat and freezing.

INCOMPATIBILITY: Incompatible with strong bases and oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Normal decomposition products, i.e., COx, NOx.

11. Toxicological Information

EFFECT OF OVEREXPOSURE - INHALATION: Under normal use conditions, this product is not expected to cause adverse health effects. During application and cure, this product releases methanol. During application and cure, this product releases acetic acid. Inhalation of vapors in high concentration may cause mild irritation of respiratory system (nose, mouth, mucous membranes).

EFFECT OF OVEREXPOSURE - SKIN CONTACT: Under normal use conditions, this product is not expected to cause adverse health effects. Prolonged or repeated contact with skin may cause mild irritation.

EFFECT OF OVEREXPOSURE - EYE CONTACT: Under normal use conditions, this product is not expected to cause adverse health effects. Direct eye contact may cause irritation.

EFFECT OF OVEREXPOSURE - INGESTION: Under normal use conditions, this product is not expected to cause adverse health

effects. Single dose oral toxicity is very low. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of large amounts may cause injury. Ingestion may result in obstruction when material hardens.

CARCINOGENICITY: No Information

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Inhalation, Skin Contact

Acute Toxicity Values

The acute effects of this product have not been tested. Data on individual components are tabulated below

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
64742-46-7	Hydrotreated middle distillate	7400 mg/kg Rat	>2000 mg/kg Rabbit	4.6 mg/L Rat
7631-86-9	Silica, amorphous	>3300 mg/kg Rat	>5000 mg/kg Rabbit	>20 mg/L
4253-34-3	Silanetriol, methyl-, triaceta	1602 mg/kg Rat	1060 mg/kg Rabbit	11.6 mg/L

N.I. = No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Ecological injuries are not known or expected under normal use.

13. Disposal Information

DISPOSAL METHOD: This product does not meet the definition of a hazardous waste according to U.S. EPA Hazardous Waste Management Regulation, 40 CFR Section 261. Dispose as hazardous waste according to all local, state, federal and provincial regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Scrape up dried material and place into containers. Use personal protective equipment as necessary. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations.

14. Transport Information

SPECIAL TRANSPORT PRECAUTIONS: No Information

DOT Proper Shipping Name: Not Regulated

DOT Technical Name: N.A.

DOT Hazard Class: N.A.

Packing Group: N.A.

Hazard SubClass: N.A.

DOT UN/NA Number: N.A.

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA12(b) components exist in this product in concentrations at or above their thresholds.

CALIFORNIA PROPOSITION 65 CARCINOGENS

This product does not contain any chemicals known to the State of California to cause cancer.

CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS

This product does not contain any chemicals known to the State of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

WHMIS Class Consumer Commodity

16. Other Information

Revision Date:	5/19/2015	**Supersedes Date:**	No Information
Reason for revision:	HazCom2012/GHS Conversion		
Datasheet produced by:	Regulatory Department		

HMIS Ratings:

Health:	1	**Flammability:**	1	**Reactivity:**	0	**Personal Protection:**	X

VOC Less Water Less Exempt, g/L:28.9

VOC, Material, g/L:29

VOC as Defined by California Consumer Product Regulation, Wt/Wt%:3.0

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS06

GHS07

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS. Since thisdocument is intended only as a guide to the appropriate use and precautionary handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

LA-CO Industries, Inc.

Slic-Tite® Paste with PTFE

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations, Canada Hazardous Products Regulations (HPR) / Règlement sur les produits dangereux (RPD)

Date of issue: 09/17/2012 Revision date: 02/19/2020 Supersedes: 10/14/2015 Version: 3.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : Slic-Tite® Paste with PTFE

1.2. Recommended use and restrictions on use

Use of the substance/mixture : sealant

Restrictions on use : No additional information available

1.3. Supplier

LA-CO Industries, Inc.
1201 Pratt Boulevard
Elk Grove Village, IL. 60007-5746
Phone: (847) 956-7600
Fax: (847) 956-9885
E-mail: customer_service@laco.com

1.4. Emergency telephone number

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887;
全国应急中心 0532 8388 9090

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

No labelling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (w/w)	GHS classification
Titanium dioxide	(CAS-No.) 13463-67-7	1 - 5	Carc. 2, H351

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : Wash with plenty of water/....

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : None known.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Dry powder. Carbon dioxide. Foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No particular fire or explosion hazard.

Reactivity : No dangerous reactions known.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Use self-contained breathing apparatus. Wear fire/flame resistant/retardant clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel

Protective equipment : Wear suitable gloves. Chemical goggles or safety glasses.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable gloves. Chemical goggles or safety glasses.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb and/or contain spill with inert material, then place in suitable container.

Methods for cleaning up : Take up in non-combustible absorbent material and shove into container for disposal.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid breathing vapours.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry, cool and well-ventilated place.

Incompatible products : Strong oxidizing agents. Strong acids. Strong bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Titanium dioxide (13463-67-7)		
ACGIH	Local name	Titanium dioxide
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
ACGIH	Remark (ACGIH)	TLV® Basis: LRT irr. Notations: A4 (Not classifiable as a Human Carcinogen)

Titanium dioxide (13463-67-7)		
ACGIH	Regulatory reference	ACGIH 2019
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Use rubber gloves.

Eye protection:

In case of splashing or aerosol production: protective goggles.

Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges.

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Paste. Viscous.
Colour	: white
Odour	: Oily
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 177 °C
Flash point	: 150 °C
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Specific gravity 1.48
Solubility	: insoluble in water.
Log Pow	: < 1
Auto-ignition temperature	: No data available
Decomposition temperature	: > 300 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat. Open flame.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids.

10.6. Hazardous decomposition products

Burning produces irritating, toxic and noxious fumes. Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Titanium dioxide (13463-67-7)	
LD50 oral rat	> 5000 mg/kg
LC50 inhalation rat (mg/l)	> 6.82 mg/l/4h

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified.

Titanium dioxide (13463-67-7)	
NOAEL (chronic, oral, animal/male, 2 years)	5 mg/kg bodyweight rat
Additional information	Carcinogen, cat 1A or 1B Inhalation of dust
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Likely routes of exposure : Skin and eye contact.

Symptoms/effects : None known.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

Slic-Tite® Paste with PTFE	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Slic-Tite® Paste with PTFE	
Log Pow	< 1

Slic-Tite® Paste with PTFE	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Slic-Tite® Paste with PTFE	
Ecology - soil	Not established.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated.

Transportation of Dangerous Goods

Not regulated.

Transport by sea

Not regulated.

Air transport

Not regulated.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Titanium dioxide (13463-67-7)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

Titanium dioxide (13463-67-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Slic-Tite® Paste with PTFE
All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS). All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

Titanium dioxide (13463-67-7)
Listed on IARC (International Agency for Research on Cancer) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on Taiwan National Chemical Inventory Listed on the AICS (Australian Inventory of Chemical Substances) Listed on the TCSI (Taiwan Chemical Substance Inventory)

Titanium dioxide (13463-67-7)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Japanese ISHL (Industrial Safety and Health Law)

15.3. US State regulations

Slic-Tite® Paste with PTFE	
State or local regulations	The titanium dioxide in this product is bound and is not respirable. California Prop. 65 warnings are not required.

Component	State or local regulations
Titanium dioxide(13463-67-7)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date : 02/19/2020

Data sources : ACGIH (American Conference of Government Industrial Hygienists). European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.

Other information : None.

Full text of H-statements:

H351	Suspected of causing cancer.

Abbreviations and acronyms:

	ACGIH (American Conference of Government Industrial Hygienists)
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	PBT: Persistent, Bioaccumulative, Toxic
	TSCA: Toxic Substances Control Act

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.

Indication of changes:
Composition/information on ingredients. Regulatory information.

SDS Prepared by: The Redstone Group
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Suite 200
Westerville, OH USA 43082
P: +1 (614) 923-7472
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SAFETY DATA SHEET

Section 1: Product and Company Identification

Product Name: Slic-Tite® Paste with PTFE

Product Code: 41209, 42009, 41219, 42019, 42012, 42029, 42013, 42049, 42014, 42015, 42069

Product Use: Heavy-duty thread sealant.

Manufacturer:
LA-CO Industries, Inc.
1201 Pratt Boulevard
Elk Grove Village, IL.
60007-5746
E-mail Contact: customer_service@laco.com

Phone Number: (847) 956-7600
Fax: (847) 956-9885

24-hour Emergency: **CHEMTREC: (800) 424-9300**

Section 2: Hazards Identification

Protective Clothing	NFPA Rating (USA)	EC Classification	WHMIS (Canada)	Transportation
Not Required for Normal Use		Not Classified as Dangerous	Not Controlled	Not Regulated

Emergency Overview: Exposure to hazardous or dangerous substances is not expected when handling this product for its intended use. Extreme heating (>300°C) or during a fire may generate dense smoke, irritating and toxic fumes.

Appearance, Color and Odor: Viscous paste; white; grease-like odor.

USA: This product is not a hazardous material as defined by 29 CFR1910.1200, OSHA Hazard Communication Standard.

Canada: This is not a controlled product under WHMIS.

European Communities (EC): This product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

While this product is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Potential Health Effects: **ACUTE (short term): see Section 8 for exposure controls**

Relevant Route(s) of Exposure: Skin contact.

Inhalation: Inhalation is not expected with normal use.

Extreme heating (>300°C) of the product can release irritating vapors. Symptoms of irritation include coughing, sneezing, nasal discharge, headache, hoarseness and pain in the upper respiratory tract.
Products of thermal decomposition of fluorocarbon monomers and polymers can produce a condition known as "polymer-fume fever"; the symptoms are flu-like (chills, headache and fever) with chest tightness and mild cough; onset of symptoms may be delayed.

Ingestion: Not an applicable route of occupational exposure. Components of the product have low oral toxicity.

Skin: No health effects expected with normal use of the product.

Eye: Direct eye contact may cause temporary irritation as a foreign object in the eye. Symptoms of irritation include redness, swelling, pain and blurred or hazy vision.

SAFETY DATA SHEET

Section 2: Hazards Identification, continued

CHRONIC (long term): see Section 11 for additional toxicological data

Prolonged or repeated skin contact may cause dermatitis in some individuals.

Medical Conditions Aggravated by Exposure: Skin contact may aggravate an existing dermatitis.

Interactions With Other Chemicals: Cigarette smoking is a common means of creating exposure to the products of decomposition of fluorocarbon monomers and polymers. Fluorocarbons may be deposited on cigarettes from the air or from workers' fingers. As a cigarette is smoked, fluorocarbons are then burned and the products of decomposition are inhaled with the cigarette smoke.

Potential Environmental Effects: Not available

Section 3: Composition / Information on Ingredients

Hazardous Ingredients:

Chemical Name	CAS No.	Wt.%	EINECS / ELINCS	Symbol	Risk Phrases
Ethanol	64-17-5	0.1 - 0.5	200-578-6	F	R11
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	10 - 30	265-156-6	Not applicable contains <3% DMSO extract by IP 346	
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	10 - 30	265-155-0	Not applicable contains <3% DMSO extract by IP 346	
PTFE	9002-84-0	15 - 40	Polymer not listed Monomer is listed 204-126-9	None*	None

* This chemical substance is not classified in the Annex I of Directive 67/548/EEC.
Note: See Section 16 for the full text of the R-phrases above.

Section 4: First Aid Measures

Inhalation: If symptoms are experienced remove source of contamination or move victim to fresh air and obtain medical advice.

Eye Contact: No effects expected. If irritation occurs, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.

Skin Contact: No health effects expected. If irritation does occur, flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.

Ingestion: If irritation or discomfort occurs, obtain medical advice immediately.

Section 5: Fire Fighting Measures

Flammable Properties: The paste can burn if involved in a fire but does not ignite readily.

Suitable extinguishing Media: Use extinguishing media appropriate for the surrounding fire.

Unsuitable extinguishing Media: Not available

Explosion Data:
Sensitivity to Mechanical Impact: Not applicable

Sensitivity to Static Discharge: Not applicable

Specific Hazards arising from the Chemical: During a fire, products of combustion may include Hydrogen fluoride, Perfluoro- carbon olefins and oxides of carbon.

SAFETY DATA SHEET

Section 5: Fire Fighting Measures, continued

Protective Equipment and precautions for firefighters: Self-contained breathing apparatus and protective clothing should be worn. Remove all unprotected personnel.

NFPA

Health: 1
Flammability: 1
Instability: 0

Section 6: Accidental Release Measures

Personal Precautions: Wear adequate personal protective equipment as indicated in Section 8.

Environmental Precautions: Minimize entry of material into sewers and drainage systems.

Methods for Containment: Contain spill immediately.

Methods for Clean-up: Scrape or scoop product for re-use or place in a secure container for disposal.

Section 7: Handling and Storage

Handling: Wash hands thoroughly with detergent and water after handling, before eating, drinking, smoking or using the toilet. Remove contaminated clothing and wash before reuse. Keep out of reach of children.

Storage: Store in a cool, dry area, out of direct sunlight and away from heat, flames and ignition sources. Keep containers closed when not in use.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

Some component substances in this preparation have Occupational Exposure Limits/Guidelines. Exposure to airborne component substances is not expected with anticipated use. Consult local authorities for acceptable exposure limits.

Exposure Controls

Engineering Controls: Not required for normal use.

Personal Protection:

Eye/Face Protection: Not required for normal use.

Skin Protection: Not required for normal use.

Respiratory Protection: Not required for normal use.

General Hygiene Measures: Avoid breathing fumes generated from heated product. Do not eat, drink or smoke in work areas. Wash hands after handling this product.

SAFETY DATA SHEET

Section 9: Physical and Chemical Properties

Physical State:	Solid	**Flash Point & method:**	150°C (300°F)
Appearance, Color and Odor:	Viscous paste; white; grease-like odor.	**Autoignition Temperature:**	Not available
Odor Threshold:	Not available	**Flammability Limits in Air:**	Not available
pH:	Not applicable	**Vapor Pressure:**	Not applicable
Specific Gravity: (water = 1)	1.48 (12.35 lbs/gal.)	**Vapor Density: (Air = 1)**	Not applicable
Partition coefficient: (n-octanol/water)	<1	**Evaporation Rate: (n-Butyl Acetate = 1)**	Not applicable
Solubility:	Insoluble in water.	**Boiling Point/Range:**	177°C (350°F)
Viscosity:	Not applicable	**Melting Point:**	Not available
Decomposition Temperature:	Not available	**VOC Content:**	0% w/w

Section 10: Stability and Reactivity

Chemical Stability: Stable at normal room temperature.

Conditions to Avoid: Avoid extreme heat and open flames.

Incompatible Materials: Incompatible with strong oxidizers, strong acids, strong bases, aromatic solvents, chlorinated solvents.

Hazardous Decomposition Products: When heated to decomposition (>300°C) this material may release carbonyl fluoride, hydrogen fluoride, perfluoroisobutylene (PFIB) and other irritating and toxic vapors or particulates.

Possibility of Hazardous Reactions: Not available

Section 11: Toxicological Information

Acute Toxicity Data

	LD_{50} Oral (mg/kg)	LD_{50} Dermal (mg/kg)	LC_{50} Inhalation (4 hrs.)
Ethanol	1 501 (rat)	Not available	124.7 mg/L (rat)
Distillates (petroleum), hydrotreated light naphthenic	>5 000 (rat)	>2 000 (rabbit)	2.18 mg/L (rat)
Distillates (petroleum), hydrotreated heavy naphthenic	>5 000 (rat)	>2 000 (rabbit)	Not available
PTFE	Not available	Not available	Not available

SAFETY DATA SHEET

Section 11: Toxicological Information (continued)

Chronic Toxicity Data

Carcinogenicity:

Distillates (petroleum) have less than 3% DMSO extract as measured by IP 346. This product is not required to be labeled according to the European Directive 67/548/EEC.
Contains Titanium dioxide (IARC 2B); titanium dioxide is inextricably bound and, under normal conditions of use or during foreseeable emergencies, cannot become airborne and result in worker exposure.

ACGIH A4, Not classifiable as a human carcinogen.
Group 3 – The agent is not classifiable as to its carcinogenicity in humans.

	ACGIH	IARC	NTP
Ethanol	A4	Not applicable	Not applicable
Distillates (petroleum), hydrotreated light naphthenic	Not listed	Group 3	Not listed
Distillates (petroleum), hydrotreated heavy naphthenic	Not listed	Not listed	Not listed
PTFE	Not listed	Group 3	Not listed

ACGIH: (American Conference of Governmental Industrial Hygienists)
IARC: (International Agency for Research on Cancer)
NTP: (National Toxicology Program)

Irritation: Normal use will not result in harmful effects.

Corrosivity: Not available

Sensitization: Not applicable with normal use.

Neurological Effects: Not applicable with normal use.

Genetic Effects: Not available

Reproductive Effects: Not applicable with normal use.

Developmental Effects: Not applicable with normal use.

Target Organ Effects: Not available

Section 12: Ecological Information

Ecotoxicity: Ecotoxicity is expected to be low due to the product's insolubility in water.

Persistence/Degradability: Product is not readily biodegradeable.

Bioaccumulation/Accumulation: Not available

Mobility: Not available

Section 13: Disposal Considerations

Waste Disposal Method: Do NOT discard into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage.
The conditions of use, storage and disposal of this product are beyond our control and may be beyond our knowledge. For this and other reasons, LA-CO Industries, Inc. does not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

SAFETY DATA SHEET

Section 14: Transport Information:

U.S. Hazardous Materials Regulation (DOT 49CFR):	Not regulated as a dangerous good for transport.
Canadian Transportation of Dangerous Goods (TDG):	Not regulated as a dangerous good for transport.
ADR/RID:	Not regulated as a dangerous good for transport.
IMDG:	Not regulated as a dangerous good for transport.
Marine Pollutants:	Not applicable
ICAO/IATA:	Not regulated as a dangerous good for transport.

Section 15: Regulatory Information

USA

TSCA Status: All ingredients in the product are listed on the TSCA inventory.

SARA Title III

Sec. 302/304:	None
Sec: 311/312:	Not applicable
Sec. 313:	Not applicable
CERCLA RQ:	Not applicable

California Prop 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive harm.

State Right-to-Know Lists : Massachusetts, New Jersey, Pennsylvania; Distillates (petroleum), hydrotreated naphthenic, Ethanol, 12-hydroxy lithium stearate, Titanium dioxide, BHT.

Canada

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the SDS contains all the information required by the *Controlled Products Regulations*.

WHMIS Classification: (for workplace exposures) Not controlled

New Substance Notification Regulations: All ingredients in the product are listed, as required, on Canada's Domestic Substances List (DSL).

NPRI Substances: Not applicable

EC Classification for the Substance/Preparation

Symbol: This product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

SAFETY DATA SHEET

Section 16: Other Information

Full Text of R-phrases appearing in Section 2:	R11: Highly flammable.
Preparation Information:	
Revision Date:	August 11, 2011
Revision Summary:	Review of regulatory, hazard classification, exposure limit and toxicology data. No revisions to data.
Manufacturer Disclaimer:	The information contained herein is based on data available to us and is accurate and reliable to the best of our knowledge and belief. However, LA-CO Industries, Inc. makes no representations as to its completeness or accuracy. Information is supplied on condition that persons receiving such information will make their own determination as to its suitability for their purposes prior to use. In no event will LA-CO Industries, Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon the information contained herein.
Prepared by:	LEHDER Environmental Services Limited (519) 336-4101 www.lehder.com
Disclaimer:	While LEHDER Environmental Services Limited believes that the data set forth herein is accurate, as of the date hereof, LEHDER makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data is offered solely for your consideration, investigation and verification.

SAFETY DATA SHEET

Alloy SAC305 RA 312

Section 1. Identification

GHS product identifier : Alloy SAC305 RA 312

Reference number : GHS003

Other means of identification : Not available.

Product type : Solid. [Solder Paste]

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : AIM
9100 Henri Bourassa East
Montreal, QC
H1E 2S4
(514) 494-2000

In the United States:
AIM
25 Kenney Drive
Cranston, RI 02920
(800) CALL-AIM

In México
AIM Soldadura de México
Circuito Interior Norte # 460
Parque Industrial Salvarcar
Ciudad Juárez, Chih.
(656) 630-0032

Emergency telephone number (with hours of operation) : INFOTRAC
North America: (800) 535-5053
International: (352) 323-3500

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : May cause an allergic skin reaction.

Precautionary statements

Prevention : Wear protective gloves. Avoid breathing dust. Contaminated work clothing must not be allowed out of the workplace.

Response : IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage : Not applicable.

Section 2. Hazards identification

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	%	CAS number
Tin	≥75 - ≤90	7440-31-5
rosin	≤5	8050-09-7
silver	≤3	7440-22-4
N-methyl-2-pyrrolidone	≤3	872-50-4
Amine Decanoic Acid Salt	≤1	-
copper	≤1	7440-50-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Section 4. First aid measures

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Tin	**ACGIH TLV (United States, 3/2019).** TWA: 2 mg/m³, (as Sn) 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 10/2016).** TWA: 2 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 2 mg/m³, (as Sn) 8 hours.
rosin	**ACGIH TLV (United States, 3/2019). Skin sensitizer. Inhalation sensitizer.**
silver	**OSHA PEL 1989 (United States, 3/1989).** TWA: 0.01 mg/m³, (as Ag) 8 hours. **ACGIH TLV (United States, 3/2019).** TWA: 0.1 mg/m³ 8 hours. Form: Dust and fumes **OSHA PEL (United States, 5/2018).** TWA: 0.01 mg/m³, (as Ag) 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 0.01 mg/m³, (as Ag) 10 hours. Form: METAL DUST AND SOLUBLE
N-methyl-2-pyrrolidone	**AIHA WEEL (United States, 7/2018). Absorbed through skin.**

Section 8. Exposure controls/personal protection

Amine Decanoic Acid Salt copper	TWA: 10 ppm 8 hours. None. **ACGIH TLV (United States, 3/2019).** TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dust and mist TWA: 0.2 mg/m³ 8 hours. Form: Fume **OSHA PEL 1989 (United States, 3/1989).** TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m³, (as Cu) 8 hours. Form: Fume **NIOSH REL (United States, 10/2016).** TWA: 1 mg/m³, (as Cu) 10 hours. Form: Dusts and Mists **OSHA PEL (United States, 5/2018).** TWA: 1 mg/m³ 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m³ 8 hours. Form: Fume

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Solder Paste]

Color : Colorless.

Odor : Odorless.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available

Boiling point : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
rosin	LD50 Oral	Rat	7600 mg/kg	-
N-methyl-2-pyrrolidone	LD50 Dermal	Rabbit	8 g/kg	-
	LD50 Oral	Rat	3914 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
N-methyl-2-pyrrolidone	Eyes - Moderate irritant	Rabbit	-	100 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Amine Decanoic Acid Salt copper	None. -	4 -	- Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
N-methyl-2-pyrrolidone	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	380487.8 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
silver	Acute EC50 1.4 µg/l Marine water	Algae - Chroomonas sp.	4 days
	Acute EC50 0.24 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 11 µg/l Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours
	Acute LC50 2.13 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 5 mg/l Marine water	Algae - Glenodinium halli	72 hours
N-methyl-2-pyrrolidone	Acute LC50 1.23 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 832 ppm Fresh water	Fish - Lepomis macrochirus	96 hours
copper	Acute EC50 1100 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 2.1 µg/l Fresh water	Daphnia - Daphnia longispina - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute IC50 13 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute IC50 5.4 mg/l Marine water	Aquatic plants - Plantae - Exponential growth phase	72 hours
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 7.56 µg/l Marine water	Fish - Periophthalmus waltoni - Adult	96 hours
	Chronic NOEC 2.5 µg/l Marine water	Algae - Nitzschia closterium - Exponential growth phase	72 hours
	Chronic NOEC 7 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	Chronic NOEC 0.02 mg/l Fresh water	Crustaceans - Cambarus bartonii - Mature	21 days
	Chronic NOEC 2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.8 µg/l Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	6 weeks

Section 12. Ecological information

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
rosin	1.9 to 7.7	-	high
silver	-	70	low
N-methyl-2-pyrrolidone	-0.46	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	**Reportable quantity** 38095.2 lbs / 17295.2 kg. Package sizes shipped in quantities less than the product reportable quantity are	-	-	-	-	-

Section 14. Transport information

	not subject to the RQ (reportable quantity) transportation requirements.					

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: TIN; SILVER; 1-METHYL-2-PYRROLIDONE

New York : The following components are listed: Silver

New Jersey : The following components are listed: TIN; SILVER; 1-METHYL-2-PYRROLIDONE; 2-PYRROLIDINONE, 1-METHYL-; bis(2-butoxyethyl) ether

Pennsylvania : The following components are listed: TIN; SILVER COMPOUNDS; 2-PYRROLIDINONE, 1-METHYL-; bis(2-butoxyethyl) ether; ROSIN CORE SOLDER PYROLYSIS PRODUCTS

California Prop. 65

WARNING: This product can expose you to N-methylpyrrolidone, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
N-methyl-2-pyrrolidone	No.	Yes.	-	Yes.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Ingredient name	List name	Status
Triethanolamine	Schedule III	Listed

Montreal Protocol

Not listed.

Section 15. Regulatory information

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

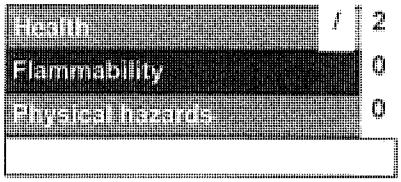
International lists

National inventory

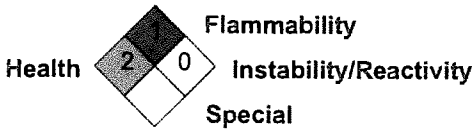
Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Europe	: Not determined.
Japan	: **Japan inventory (ENCS)**: Not determined. **Japan inventory (ISHL)**: Not determined.
Malaysia	: Not determined
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Turkey	: Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
SKIN SENSITIZATION - Category 1	Calculation method

History

Date of printing	: 3/4/2020
	: 3/4/2020

Section 16. Other information

Date of issue/Date of revision

Date of previous issue : 3/3/2020

Version : 0.05

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : -ACGIH, Threshold Limit Values, 1994-1995. -Canada Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List". -CFR29, OSHA's Permissible Exposure Limits, revision July, 1993. -CFR29, part 1910.1200, Hazard Communication. -CHEMTOX database -Components' manufacturer's Material Safety Data Sheet. -CRC Handbook of chemistry and physics, 67 th edition, CRC Press inc., Boca Raton, Florida. -CSST (Comission de Santé et Sécurité au Travail), document #RT-12: Classification of Certain Chemical Substances. -IATA, Dangerous Goods Regulations, 37th edition (January 1, 1996) -NFPA, Fire Protection Guide to Chemical Hazards, 11th edition. -NIOSH, Pocket Guide to Chemical Hazards, revision June 1994. Sigma-Alrich handbook of fine chemicals, 1998 -TSCA (Toxic Substance Contral Act), Chemical Substance Inventory List, 1985.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Alloy SAC305 W20

Section 1. Identification

GHS product identifier : Alloy SAC305 W20

Reference number : GHS003

Other means of identification : Not available.

Product type : Solid. [Solder Paste]

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : AIM
9100 Henri Bourassa East
Montreal, QC
H1E 2S4
(514) 494-2000

In the United States:
AIM
25 Kenney Drive
Cranston, RI 02920
(800) CALL-AIM

In México
AIM Soldadura de México
Circuito Interior Norte # 460
Parque Industrial Salvarcar
Ciudad Juárez, Chih.
(656) 630-0032

Emergency telephone number (with hours of operation) : INFOTRAC
North America: (800) 535-5053
International: (352) 323-3500

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN SENSITIZATION - Category 1

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : May cause an allergic skin reaction.

Precautionary statements

Prevention : Wear protective gloves. Avoid breathing dust. Contaminated work clothing must not be allowed out of the workplace.

Response : IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage : Not applicable.

Section 2. Hazards identification

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	%	CAS number
Tin	≥75 - ≤90	7440-31-5
silver	≤3	7440-22-4
Terpineol	≤3	8000-41-7
Amines, N-tallow alkyltrimethylenedi-, ethoxylated	≤3	61790-85-0
rosin	≤1	8050-09-7
copper	≤1	7440-50-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Section 4. First aid measures

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Tin	**ACGIH TLV (United States, 3/2020).** TWA: 2 mg/m³, (as Sn) 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 10/2016).** TWA: 2 mg/m³ 10 hours. **OSHA PEL (United States, 5/2018).** TWA: 2 mg/m³, (as Sn) 8 hours.
silver	**ACGIH TLV (United States, 3/2020).** TWA: 0.1 mg/m³ 8 hours. Form: Dust and fumes **OSHA PEL 1989 (United States, 3/1989).** TWA: 0.01 mg/m³, (as Ag) 8 hours. **OSHA PEL (United States, 5/2018).** TWA: 0.01 mg/m³, (as Ag) 8 hours. **NIOSH REL (United States, 10/2016).** TWA: 0.01 mg/m³, (as Ag) 10 hours. Form: METAL DUST AND SOLUBLE
Terpineol	None.
Amines, N-tallow alkyltrimethylenedi-, ethoxylated	None.
rosin	**ACGIH TLV (United States, 3/2020). Skin sensitizer. Inhalation sensitizer.**
copper	**ACGIH TLV (United States, 3/2020).**

Section 8. Exposure controls/personal protection

	TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dust and mist TWA: 0.2 mg/m³ 8 hours. Form: Fume **OSHA PEL 1989 (United States, 3/1989).** TWA: 1 mg/m³, (as Cu) 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m³, (as Cu) 8 hours. Form: Fume **NIOSH REL (United States, 10/2016).** TWA: 1 mg/m³, (as Cu) 10 hours. Form: Dusts and Mists **OSHA PEL (United States, 5/2018).** TWA: 1 mg/m³ 8 hours. Form: Dusts and Mists TWA: 0.1 mg/m³ 8 hours. Form: Fume

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state	: Solid. [Solder Paste]
Color	: Not available.
Odor	: Not available.
Odor threshold	: Not available.
pH	: Not available.
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Not available.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: Not available.
Solubility	: Not available.
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Terpineol	LD50 Oral	Rat	4300 mg/kg	-
Amines, N-tallow alkyltrimethylenedi-, ethoxylated	LD50 Oral	Rat	>500 mg/kg	-
rosin	LD50 Oral	Rat	7600 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Terpineol	Eyes - Mild irritant	Mammal - species unspecified	-	12.5 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
copper	-	-	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Section 11. Toxicological information

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	19037.87 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
silver	Acute EC50 1.4 µg/l Marine water	Algae - Chroomonas sp.	4 days
	Acute EC50 0.24 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 11 µg/l Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours
	Acute LC50 2.13 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 5 mg/l Marine water	Algae - Glenodinium halli	72 hours
copper	Acute EC50 1100 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute EC50 2.1 µg/l Fresh water	Daphnia - Daphnia longispina - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute IC50 13 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute IC50 5.4 mg/l Marine water	Aquatic plants - Plantae - Exponential growth phase	72 hours
	Acute LC50 0.072 µg/l Marine water	Crustaceans - Amphipoda - Adult	48 hours
	Acute LC50 7.56 µg/l Marine water	Fish - Periophthalmus waltoni - Adult	96 hours
	Chronic NOEC 2.5 µg/l Marine water	Algae - Nitzschia closterium - Exponential growth phase	72 hours
	Chronic NOEC 7 mg/l Fresh water	Aquatic plants - Ceratophyllum demersum	3 days
	Chronic NOEC 0.02 mg/l Fresh water	Crustaceans - Cambarus bartonii - Mature	21 days
	Chronic NOEC 2 µg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 0.8 µg/l Fresh water	Fish - Oreochromis niloticus - Juvenile (Fledgling, Hatchling, Weanling)	6 weeks

Persistence and degradability

Section 12. Ecological information

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
silver	-	70	low
Terpineol	2.6	24.13	low
rosin	1.9 to 7.7	-	high

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	**Reportable quantity** 37664.8 lbs / 17099.8 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to	-	-	-	-	-

Section 14. Transport information

	the RQ (reportable quantity) transportation requirements.					

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

State regulations

Massachusetts : The following components are listed: TIN; SILVER

New York : The following components are listed: Silver

New Jersey : The following components are listed: TIN; SILVER

Pennsylvania : The following components are listed: TIN; SILVER COMPOUNDS

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Ingredient name	List name	Status
Triethanolamine	Schedule III	Listed

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

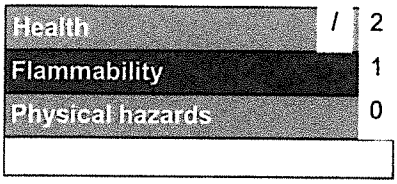
National inventory

Section 15. Regulatory information

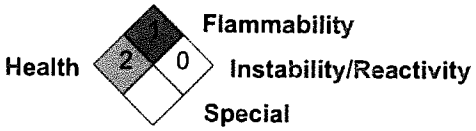
Australia	: Not determined.
Canada	: All components are listed or exempted.
China	: All components are listed or exempted.
Europe	: Not determined.
Japan	: **Japan inventory (ENCS)**: Not determined. **Japan inventory (ISHL)**: Not determined.
Malaysia	: Not determined
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: All components are listed or exempted.
Taiwan	: All components are listed or exempted.
Turkey	: Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)



National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
SKIN SENSITIZATION - Category 1	Calculation method

History

Date of printing	: 1/18/2021
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Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973

Section 16. Other information

as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

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