SAFETY DATA SHEET

Issuing Date 21-Oct-2014 **Revision Date** 21-Oct-2014 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **ROBROY COPPER ANTI-SEIZE**

Other means of identification

Product Code(s) **62604**

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Lubricants, Greases and Release Products

Uses advised against No information available

Supplier's details

Manufacturer Address
Jet-Lube, Inc.
4849 Homestead Rd.
Suite 232
Houston, Texas 77028
TEL: 713-670-5700 (7:00 a.m. - 5:00 p.m.)

Emergency telephone number

Emergency Telephone Number CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200).

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **None**

The product contains no substances which at their given concentration are considered to be hazardous to health
Appearance Copper, Bronze **Physical State** Semi-solid (gel). **Odor** Petroleum like

Precautionary Statements
Prevention
• None
General Advice

- None

Storage
- None

Disposal
- None

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information
23% of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Lubricating greases A complex combination of hydrocarbons having carbon numbers predominantly in the range of C12 through C50. may contain organic salts of alkali metals, alkaline earth metals, etc.	74869-21-9	65-75	*
Limestone	1317-65-3	5 -10	*
Talc	14807-96-6	5 -10	*
Mica	12001-26-2	1-5	*
Copper	7440-50-8	2-8	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation Move to fresh air.

Ingestion Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray. Carbon dioxide (CO_2). Foam. Dry powder. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Burning produces obnoxious and toxic fumes. Heavy metal compounds

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment.

Environmental Precautions

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Wear personal protective equipment. Ensure adequate ventilation.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Keep in a bunded area

Incompatible Products Strong oxidizing agents. Acetylene. Vinyl compounds.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Limestone 1317-65-3	-	TWA: 15 mg/m³ TWA: 5 mg/m³ (vacated) TWA: 15 mg/m³	TWA: 5 mg/m³ respirable dust TWA: 10 mg/m³ total dust
Talc 14807-96-6	TWA: 2 mg/m³	TWA: 20 mppcf (<1% Crystalline silica) 3 mg/m₃ (vacated)	IDLH: 1500 mg/m₃ containing <1% quartz TWA: 3 mg/m₃ respirable dust
Copper 7440-50-8	TWA: 0.2 mg/m³ fume	TWA: 0.1 mg/m³ fume TWA: 1 mg/m³ dust and mist (vacated) TWA: 0.1 mg/m³ Cu dust, fume, mist	IDLH: 100 mg/m³ dust, fume and mist TWA: 1 mg/m³ dust and mist TWA: 0.1 mg/m³ fume

Mica 12001-26-2	TWA: 3 mg/m3	TWA: 20 mppcf (<1% crystalline silica) 3 mg/m3 (vacated)	IDLH: 1500 mg/m3 containing <1% quartz TWA: 3 mg/m3 respirable dust

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir. 1992).

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side-shields.
Skin and Body Protection Protective gloves. Long sleeved clothing.
Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Semi-solid (gel)
Odor Petroleum like
Appearance Copper, Bronze
Odor Threshold No information available

Property	Values	Remarks/ - Method
pH	Neutral	None known
Melting Point/Range	> 232 °C	None known
Boiling Point/Boiling Range	> 260 °C	None known
Flash Point	> 221 °C	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	No data available	None known
Specific Gravity	1.09	None known
Water Solubility	Insoluble in water.	None known
Solubility in other solvents	Largely.	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties Not flammable

Explosive Properties No data available
Oxidizing Properties No data available

Other information

VOC Content (%) No data available
VOC (g/l) None

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Incompatible products.

Incompatible materials

Strong oxidizing agents. Acetylene. Vinyl compounds.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation	None known.
Eye Contact	None known.
Skin Contact	None known.
Ingestion	Not an expected route of exposure. May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Lubricating greases A complex combination of hydrocarbons having carbon numbers predominantly in the range of C12 through C50. may contain organic salts of alkali metals, alkaline earth metals, etc.	= 2280 mg/kg (Rat)	-	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.

Mutagenic Effects	No information available.
Carcinogenicity	Contains no ingredients above reportable quantities listed as a carcinogen.
Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.

Aspiration Hazard No information available.

Numerical measures of toxicity - Product

Acute Toxicity 23% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral 2372 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic toxicity is unlikely due to low solubility. Based on available data, the classification criteria are not met Lc50/48h/Acartia tonsa = >1000 mg/L EC50/72h/Skeletonema costatum = >1000 mg/L LC50/96h/Scophthalmus maximus = >1000 mg/L

Sea sediment LC50/10d/Corophium sp. = 925 - 3502 mg/kg

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Lubricating greases A complex combination of hydrocarbons having carbon numbers predominantly in the range of C12 through C50, may contain organic salts of alkali metals, alkaline earth metals, etc. 74869-21-9	>1001 mg/l	LC50 96 h: > 2000 mg/L (Salmo gairdneri)		
Copper 7440-50-8	EC50 96 h: 0.031 - 0.054 mg/L static (Pseudokirchneriella subcapitata) EC50 72 h: 0.0426 - 0.0535 mg/L static (Pseudokirchneriella subcapitata)	LC50 96 h: 0.0068 - 0.0156 mg/L (Pimephales promelas) LC50 96 h: < 0.3 mg/L static (Pimephales promelas) LC50 96 h: = 0.052 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: = 0.112 mg/L flow-through (Poecilia reticulata) LC50 96 h: = 0.2 mg/L flow-through (Pimephales promelas) LC50 96 h: = 0.3 mg/L semi-static (Cyprinus carpio) LC50 96 h: = 0.8 mg/L static (Cyprinus carpio) LC50 96 h: = 1.25 mg/L static (Lepomis macrochirus)	-	EC50 48 h: = 0.03 mg/L Static (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation No information available.

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with local regulations. Where possible recycling is preferred to disposal or incineration.

Contaminated Packaging Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Copper	Toxic

14. TRANSPORT INFORMATION

DOT 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

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Copper	7440-50-8	3	1.0

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

Clean Water Act
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Copper		X	X	

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances	RQ
Copper	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Limestone	X	X	X		X
Talc	X	X	X		X
Copper	X	X	X	X	X
Mica	X	X	X		X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	**Health Hazard** 1	**Flammability** 1	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 1	**Flammability** 1	**Physical Hazard** 0	**Personal Protection** X

Prepared By
Product Stewardship
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Latham, NY 12110
1-800-572-6501

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General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

1. Identification

Product identifier **ROBROY TOUCH UP**

Other means of identification

Product Code 07191 716230 604

Recommended use Not available.

Manufacturer/Importer/Supplier/Distributor information

Company name Quest Industrial Products, LLC.

Address N92 W14701 Anthony Avenue
Menomonee Falls, WI 53051
United States

Telephone General Assistance (262) 255-9500

Website quest-ip.com

E-mail info@quest-ip.com

Emergency phone number Chemtrec Phone 800-424-9300

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 2
	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
	Hazardous to the aquatic environment, long-term hazard	Category 3

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Flammable aerosol. Contains gas under pressure; may explode if heated. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Precautionary statement

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

Response	If on skin: Wash with plenty of water. 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. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	81.67% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 81.67% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
ACETONE		67-64-1	30 to <40
PROPANE		74-98-6	10 to <20
TOLUENE		108-88-3	10 to <20
METHYL ETHYL KETONE		78-93-3	5 to <10
N-BUTANE		106-97-8	5 to <10
PROPYLENE GLYCOL METHYL ETHER ACETATE		108-65-6	5 to <10
CARBON BLACK		1333-86-4	0.1 to <1
ETHYLBENZENE		100-41-4	0.1 to <1
TITANIUM DIOXIDE		13463-67-7	0.1 to <1
Other components below reportable levels			10 to <20

*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	Remove contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
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. Get medical attention if irritation develops and persists.
Ingestion	Not likely, due to the form of the product. In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Alcohol resistant foam. 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	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Flammable aerosol. Contents under pressure. Pressurized container may explode when exposed to heat or flame.

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. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Emergency personnel need self-contained breathing equipment. 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	Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Suck back of water into the container must be prevented. Do not allow backfeed into the container. Purge air from system before introducing gas. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Do not re-use empty containers. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Level 2 Aerosol. Store locked up. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Stored containers should be periodically checked for general condition and leakage. 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	Form
ACETONE (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm	
CARBON BLACK (CAS 1333-86-4)	PEL	3.5 mg/m3	
ETHYLBENZENE (CAS 100-41-4)	PEL	435 mg/m3 100 ppm	
METHYL ETHYL KETONE (CAS 78-93-3)	PEL	590 mg/m3 200 ppm	
PROPANE (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm	
TITANIUM DIOXIDE (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
TOLUENE (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
ACETONE (CAS 67-64-1)	STEL	750 ppm	
	TWA	500 ppm	
CARBON BLACK (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
ETHYLBENZENE (CAS 100-41-4)	TWA	20 ppm	
METHYL ETHYL KETONE (CAS 78-93-3)	STEL	300 ppm	
	TWA	200 ppm	
N-BUTANE (CAS 106-97-8)	STEL	1000 ppm	
TITANIUM DIOXIDE (CAS 13463-67-7)	TWA	10 mg/m3	
TOLUENE (CAS 108-88-3)	TWA	20 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
ACETONE (CAS 67-64-1)	TWA	590 mg/m3 250 ppm
CARBON BLACK (CAS 1333-86-4)	TWA	0.1 mg/m3
ETHYLBENZENE (CAS 100-41-4)	STEL	545 mg/m3 125 ppm
	TWA	435 mg/m3 100 ppm
METHYL ETHYL KETONE (CAS 78-93-3)	STEL	885 mg/m3 300 ppm
	TWA	590 mg/m3 200 ppm
N-BUTANE (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
PROPANE (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm
TOLUENE (CAS 108-88-3)	STEL	560 mg/m3 150 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
	TWA	375 mg/m3 100 ppm

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
PROPYLENE GLYCOL METHYL ETHER ACETATE (CAS 108-65-6)	TWA	50 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
ACETONE (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
ETHYLBENZENE (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
METHYL ETHYL KETONE (CAS 78-93-3)	2 mg/l	MEK	Urine	*
TOLUENE (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

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

Exposure guidelines

US - California OELs: Skin designation

PROPYLENE GLYCOL METHYL ETHER ACETATE (CAS 108-65-6)	Can be absorbed through the skin.
TOLUENE (CAS 108-88-3)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

TOLUENE (CAS 108-88-3)	Skin designation applies.

Appropriate engineering controls 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 Wear safety glasses with side shields (or goggles).

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 In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Observe any medical surveillance requirements. When using do not 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 Aerosol. Liquefied gas.

Color Not available.

Odor Not available.

Odor threshold Not available.

pH	Not available.
Melting point/freezing point	-305.68 °F (-187.6 °C) estimated
Initial boiling point and boiling range	-43.78 °F (-42.1 °C) estimated
Flash point	-156.0 °F (-104.4 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.3 % estimated
Flammability limit - upper (%)	12.8 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	2174.34 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	550 °F (287.78 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	6.27 lbs/gal
Explosive properties	Not explosive.
Flammability class	Flammable IA estimated
Heat of combustion (NFPA 30B)	29.19 kJ/g estimated
Oxidizing properties	Not oxidizing.
Percent volatile	88.43
Specific gravity	0.75
VOC	388.3 g/l Material 596.74 g/l Regulatory 3.24 lbs/gal Material 4.98 lbs/gal Regulatory

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	Heat. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Nitrates. Ammonia. Amines. Isocyanates. Fluorine. Caustics. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Causes skin irritation.

Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Narcotic effects.

Components	Species	Test Results
ACETONE (CAS 67-64-1)		
Acute		
Dermal		
LD50	Rabbit	> 15800 mg/kg
Inhalation		
LC50	Rat	76 mg/l, 4 Hours
Oral		
LD50	Mouse	3000 mg/kg
	Rat	5800 mg/kg
CARBON BLACK (CAS 1333-86-4)		
Acute		
Oral		
LD50	Rat	> 8000 mg/kg
ETHYLBENZENE (CAS 100-41-4)		
Acute		
Dermal		
LD50	Rabbit	17800 mg/kg
Oral		
LD50	Rat	3500 mg/kg
METHYL ETHYL KETONE (CAS 78-93-3)		
Acute		
Dermal		
LD50	Rabbit	> 8000 mg/kg
Inhalation		
LC50	Mouse	11000 ppm, 45 Minutes
	Rat	11700 ppm, 4 Hours
Oral		
LD50	Mouse	670 mg/kg
	Rat	2300 - 3500 mg/kg
N-BUTANE (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
PROPANE (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Rat	> 1442.847 mg/l, 15 Minutes
TOLUENE (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	12124 mg/kg
		14.1 ml/kg

Components	Species	Test Results
Inhalation		
LC50	Mouse	5320 ppm, 8 Hours
		400 ppm, 24 Hours
	Rat	26700 ppm, 1 Hours
		12200 ppm, 2 Hours
		8000 ppm, 4 Hours
Oral		
LD50	Rat	2.6 g/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 Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

CARBON BLACK (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
ETHYLBENZENE (CAS 100-41-4)	2B Possibly carcinogenic to humans.
TITANIUM DIOXIDE (CAS 13463-67-7)	2B Possibly carcinogenic to humans.
TOLUENE (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure May cause drowsiness and dizziness.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Components		Species	Test Results
ACETONE (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
ETHYLBENZENE (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1.37 - 4.4 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	7.5 - 11 mg/l, 96 hours
METHYL ETHYL KETONE (CAS 78-93-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	4025 - 6440 mg/l, 48 hours

Components		Species	Test Results
Fish	LC50	Sheepshead minnow (Cyprinodon variegatus)	> 400 mg/l, 96 hours
TITANIUM DIOXIDE (CAS 13463-67-7)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours
TOLUENE (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	8.11 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

Partition coefficient n-octanol / water (log Kow)

ACETONE	-0.24
ETHYLBENZENE	3.15
METHYL ETHYL KETONE	0.29
N-BUTANE	2.89
PROPANE	2.36
TOLUENE	2.73

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. Contents under pressure. Do not puncture, incinerate or crush. 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 Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport information

DOT

UN number UN1950
UN proper shipping name UN1950, Aerosols, Flammable
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Label(s) 2.1
Packing group Not applicable.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions N82
Packaging exceptions 306
Packaging non bulk None
Packaging bulk None

IATA

UN number UN1950

UN proper shipping name	Aerosols, Flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	Aerosols, Flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
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.

DOT

IATA; IMDG

General information Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: Ensure that containers are firmly secured. Ensure cylinder valve is closed and not leaking. Ensure valve outlet cap nut or plug (where provided) is correctly fitted. Ensure valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

ACETONE (CAS 67-64-1)	Listed.
ETHYLBENZENE (CAS 100-41-4)	Listed.
METHYL ETHYL KETONE (CAS 78-93-3)	Listed.
N-BUTANE (CAS 106-97-8)	Listed.
PROPANE (CAS 74-98-6)	Listed.
TOLUENE (CAS 108-88-3)	Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
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)

Chemical name	CAS number	% by wt.
TOLUENE	108-88-3	10 to <20
ETHYLBENZENE	100-41-4	0.1 to <1

Other federal regulations

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

ETHYLBENZENE (CAS 100-41-4)
TOLUENE (CAS 108-88-3)

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

N-BUTANE (CAS 106-97-8)
PROPANE (CAS 74-98-6)

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
TOLUENE (CAS 108-88-3)	6594

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
TOLUENE (CAS 108-88-3)	35 %WV

DEA Exempt Chemical Mixtures Code Number

ACETONE (CAS 67-64-1)	6532
METHYL ETHYL KETONE (CAS 78-93-3)	6714
TOLUENE (CAS 108-88-3)	594

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

ACETONE (CAS 67-64-1)	Low priority
METHYL ETHYL KETONE (CAS 78-93-3)	Low priority

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

ACETONE (CAS 67-64-1)
CARBON BLACK (CAS 1333-86-4)

ETHYLBENZENE (CAS 100-41-4)
METHYL ETHYL KETONE (CAS 78-93-3)
N-BUTANE (CAS 106-97-8)
TITANIUM DIOXIDE (CAS 13463-67-7)
TOLUENE (CAS 108-88-3)

US. Massachusetts RTK - Substance List

ACETONE (CAS 67-64-1)
CARBON BLACK (CAS 1333-86-4)
ETHYLBENZENE (CAS 100-41-4)
METHYL ETHYL KETONE (CAS 78-93-3)
N-BUTANE (CAS 106-97-8)
PROPANE (CAS 74-98-6)
TITANIUM DIOXIDE (CAS 13463-67-7)
TOLUENE (CAS 108-88-3)

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

ACETONE (CAS 67-64-1)
CARBON BLACK (CAS 1333-86-4)
ETHYLBENZENE (CAS 100-41-4)
METHYL ETHYL KETONE (CAS 78-93-3)
N-BUTANE (CAS 106-97-8)
PROPANE (CAS 74-98-6)
TITANIUM DIOXIDE (CAS 13463-67-7)
TOLUENE (CAS 108-88-3)

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

ACETONE (CAS 67-64-1)
CARBON BLACK (CAS 1333-86-4)
ETHYLBENZENE (CAS 100-41-4)
METHYL ETHYL KETONE (CAS 78-93-3)
N-BUTANE (CAS 106-97-8)
PROPANE (CAS 74-98-6)
TITANIUM DIOXIDE (CAS 13463-67-7)
TOLUENE (CAS 108-88-3)

US. Rhode Island RTK

ACETONE (CAS 67-64-1)
ETHYLBENZENE (CAS 100-41-4)
METHYL ETHYL KETONE (CAS 78-93-3)
N-BUTANE (CAS 106-97-8)
PROPANE (CAS 74-98-6)
TOLUENE (CAS 108-88-3)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

4-Methyl-2-pentanone (CAS 108-10-1)	Listed: November 4, 2011
CARBON BLACK (CAS 1333-86-4)	Listed: February 21, 2003
CUMENE (CAS 98-82-8)	Listed: April 6, 2010
ETHYL ALCOHOL (CAS 64-17-5)	Listed: April 29, 2011
	Listed: July 1, 1988
ETHYLBENZENE (CAS 100-41-4)	Listed: June 11, 2004
SILICA, CRYSTALLINE QUARTZ (CAS 14808-60-7)	Listed: October 1, 1988
TITANIUM DIOXIDE (CAS 13463-67-7)	Listed: September 2, 2011

US - California Proposition 65 - CRT: Listed date/Developmental toxin

4-Methyl-2-pentanone (CAS 108-10-1)	Listed: March 28, 2014
ETHYL ALCOHOL (CAS 64-17-5)	Listed: October 1, 1987
METHANOL (CAS 67-56-1)	Listed: March 16, 2012
TOLUENE (CAS 108-88-3)	Listed: January 1, 1991

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

TOLUENE (CAS 108-88-3)	Listed: August 7, 2009

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No

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

*A "Yes" indicates that all components of this product comply 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 06-16-2017

Revision date 09-24-2019

Version # 04

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

NFPA ratings Health: 2
Flammability: 3
Instability: 0

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA BELIEVED TO BE RELIABLE AND THE MANUFACTURER DISCLAIMS ANY LIABILITY INCURRED FROM THE USE OR RELIANCE UPON THE SAME. THE INFORMATION GIVEN IS DESIGNED ONLY AS A GUIDANCE FOR SAFE HANDLING, 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. This safety information is not a license to use this material as claimed by any patents of third parties. The user alone must finally determine whether a contemplated use of this material will infringe any such patents, and for obtaining any required licenses.

Revision information This document has undergone significant changes and should be reviewed in its entirety.

SAFETY DATA SHEET

Issuing Date 11-Nov- 2014 **Revision Date** 11-Nov-2014 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product SDS Name **Steel Reinforced Epoxy Resin – Twin Tubes - Part A**

Robroy Industries SKU Part Numbers Covered

784011330201

Robroy Industries Product Names Covered

PVC Coating Repair Kit

Steel Reinforced Epoxy

Recommended use of the chemical and restrictions on use

Recommended Use	General Purpose Adhesive
Uses advised against	No information available

Details of the supplier of the safety data sheet

Supplier Name	Robroy Industries - Texas LLC
Supplier Address	1100 US HWY 271 S Gilmer, TX 75644
Emergency Telephone Numbers	Transportation Emergencies: Chemtrec (24 hour transportation emergency response info): 800-424-9300 or 703-527-3887 Poison/Medical Emergencies: Poison Control Centers (24 hour emergency poison / medical response info): 800-222-1222
Supplier Email	csr@robroy.com
Supplier Phone Number	903-843-5591

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 CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B SKIN SENSITIZATION - Category 1
GHS label elements	
Hazard pictograms	
Signal word	Warning!
Hazard statements	Causes skin and eye irritation. May cause an allergic skin reaction.

Precautionary statements

Prevention	Wear protective gloves. Wear eye or face protection. Avoid breathing dust. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
Response	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical 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 attention.
Storage	Not applicable.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Ingredient name	% by weight	CAS number
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	10 - 30	25068-38-6
crystalline silica non-respirable	0.1 - 1	14808-60-7
carbon black respirable	0.1 - 1	1333-86-4

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

4. FIRST AID MEASURES

Description of necessary first aid measures

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.
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.
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

Inhalation	No known significant effects or critical hazards.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Inhalation No specific data.

Skin contact Adverse symptoms may include the following:
irritation
redness

Eye contact Adverse symptoms may include the following:
pain or irritation
watering
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.

See toxicological information (Section 11)

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.

National Fire Protection Association (U.S.A.)

Health

Flammability

Instability/Reactivity

Special

Hazardous thermal decomposition products Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
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.

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).

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.

7. HANDLING AND STORAGE

Conditions for safe storage, including any incompatibilities	Do not store below the following temperature: 35°C (95°F). 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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits

Ingredient name	CAS #	Exposure limits
crystalline silica non-respirable	14808-60-7	**OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO2+5)** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable **OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO2+2)** TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable **ACGIH TLV (United States, 3/2012).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 1/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust **OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO2+2)** TWA: 30 MG/M3 / (%SiO2+2) 8 hours. Form: Total dust.
carbon black respirable	1333-86-4	**OSHA PEL 1989 (United States, 3/1989).** TWA: 3.5 mg/m³ 8 hours. **ACGIH TLV (United States, 6/2013).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 10/2013).** TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 3.5 mg/m³ 8 hours.

Appropriate engineering controls
No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

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.

Respiratory protection
Use 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 selected respirator.

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.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid.
Color	Black. [Dark]
Odor	Ethereal. [Slight]
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Closed cup: >93.3°C (>199.9°F) [Setaflash.] [Product does not sustain combustion.]
Evaporation rate	Not available.
Flammability (solid, gas)	Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge. Non-flammable in the presence of the following materials or conditions: heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.927
Solubility	Insoluble in the following materials: cold water and hot water.
Solubility in water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	>220°C (>428°F)
Viscosity	Not available.
VOC (% content)	<1%

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.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
carbon black respirable	LD50 Oral	Rat	>15400 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
reaction product: bisphenol-A(epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-

Sensitization

No specific data.

Mutagenicity

No specific data.

Carcinogenicity

No specific data.

Classification

Product/ingredient name	OSHA	IARC	NTP
crystalline silica nonrespirable	-	1	Known to be a human carcinogen.
carbon black respirable	-	2B	-

Reproductive toxicity

No specific data.

Teratogenicity

No specific data.

Specific target organ toxicity (single exposure)

No specific data.

Specific target organ toxicity (repeated exposure)

No specific data.

Aspiration hazard

No specific data.

Information on the likely routes of exposure Not available.

Potential acute health effects

Eye contact Causes serious eye irritation.

Inhalation No known significant effects or critical hazards.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Ingestion Irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact Adverse symptoms may include the following:
pain or irritation
watering
redness

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.

Long term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Potential chronic health effects No specific data.

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 No specific data.

12. ECOLOGICAL INFORMATION

Toxicity
No specific data.

Persistence and degradability
No specific data.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
reaction product: bisphenol-A(epichlorhydrin); epoxy resin	2.64 to 3.78	31	low

Mobility in soil
Soil/water partition coefficient (K_{OC}) Not available.

Other adverse effects No known significant effects or critical hazards.

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.
RCRA classification	Not available.

14. TRANSPORT INFORMATION

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN Number	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.
Additional information	-	-	-	-	-

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.

15. REGULATORY INFORMATION

U.S. Federal regulations **TSCA 8(a) PAIR**: Siloxanes and Silicones, di-Me, reaction products with silica
TSCA 9(a) CDR Exempt/partial exemption: Not determined
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

SARA 302/304

Composition/information on ingredients No products were found.

SARA 304 RQ Not applicable

SARA 311/312

Classification Immediate (acute) health hazard

Composition / information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	10-30	No.	No.	No.	Yes.	No.
crystalline silica non-respirable	0.1-1	No.	No.	No.	No.	Yes
carbon black respirable	0.1-1	No.	No.	No.	No.	Yes.

State regulations

Massachusetts The following components are listed: CALCIUM CARBONATE

New York None of the components are listed.

New Jersey The following components are listed: CALCIUM CARBONATE; LIMESTONE, SILICA, QUARTZ; QUARTZ (SiO2); CARBON BLACK

Pennsylvania The following components are listed: LIMESTONE; QUARTS (SiO2); CARBON BLACK

Minnesota Hazardous Substances None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient Name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
crystalline silica non-respirable	Yes.	No.	No.	No.
carbon black respirable	Yes.	No.	No.	No.

Canada inventory All components are listed or exempted.

International regulations

International lists

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Phillipines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Substances of very high concern None of the components are listed.

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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

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SAFETY DATA SHEET

Issuing Date 11-Nov- 2014 **Revision Date** 11-Nov-2014 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product SDS Name **Steel Reinforced Epoxy Hardener – Slow Cure – Twin Tubes - Part B**

Robroy Industries SKU Part Numbers Covered

784011330201

Robroy Industries Product Names Covered

PVC Coating Repair Kit

Robroy Industries Product Type

Steel Reinforced Epoxy

Recommended use of the chemical and restrictions on use

Recommended Use	General Purpose Adhesive
Uses advised against	No information available

Details of the supplier of the safety data sheet

Supplier Name	Robroy Industries - Texas, LLC
Supplier Address	1100 US HWY 271 Gilmer, TX 75644 USA
Emergency Telephone Numbers	Transportation Emergencies: Chemtrec (24 hour transportation emergency response info): 800-424-9300 or 703-527-3887 Poison/Medical Emergencies: Poison Control Centers (24 hour emergency poison / medical response info): 800-222-1222
Supplier Email	csr@robroy.com
Supplier Phone Number	903-843-5591

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	ACUTE TOXICITY: ORAL - Category 4 ACUTE TOXICITY: INHALATION – Category 4
GHS label elements	

Hazard pictograms

Signal word	Warning!
Hazard statements	Harmful if swallowed or if inhaled.

Precautionary statements

Prevention Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.

Storage Not applicable.

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

Hazards not otherwise classified None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture Mixture

Ingredient name	% by weight	CAS number
benzyl alcohol	1-5	100-51-6
titanium dioxide	1-5	13463-67-7
2,4,6-tris(dimethylaminomethyl)phenol	1-5	90-72-2

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

4. FIRST AID MEASURES

Description of necessary first aid measures

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 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 Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

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.

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 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

Inhalation Harmful if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact No known significant effects or critical hazards.

Eye contact No known significant effects or critical hazards.

Ingestion Harmful if swallowed.

Over-exposure signs/symptoms

Inhalation No specific data.

Skin contact No specific data.

Eye contact No specific data.

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.

See toxicological information (Section 11)

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 In a fire or if heated, a pressure increase will occur and the container may burst

National Fire Protection Association (U.S.A.)

Health

Flammability

Instability/Reactivity

Special

Hazardous thermal decomposition products

Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur 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.

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).

Methods and materials for containment and cleaning up

Small spill	Stop leak if without risk. Move containers from spill area. 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. 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 9see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose some hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. HANDLING AND STORAGE

Conditions for safe storage, including any incompatibilities

Do not store below the following temperature: 35°C (95°F). 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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limits

Ingredient name	CAS #	Exposure limits
benzyl alcohol	100-51-6	**AIHA WEEL (United States, 10/2011).** TWA: 10 ppm 8 hours.
titanium dioxide	13463-67-7	**ACGIH TLV (United States, 3/2012).** TWA: 10 mg/ m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 10 mg/ m³ 8 hours. Form: Total dust. **OSHA PEL (United States, 6/2010).** TWA: 15 mg/ m³ 8 hours. Form: Total dust.

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.

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.

Respiratory protection

Use 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 selected respirator.

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.
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Color	White.
Odor	Amine-like.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Closed cup: >93.3°C (>199.9°F) [Setaflash.] [Product does not sustain combustion.]
Evaporation rate	Not available.
Flammability (solid, gas)	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	1.955
Solubility	Not available.
Solubility in water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	>220°C (>392°F)
Viscosity	Not available.
VOC (% content)	<1%

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.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Benzyl alcohol	LD50 Oral	Rat	1230 mg/kg	-
2,4,6-tris (dimethylaminomethyl)phenol	LD50 Dermal LD50 Oral	Rat Rat	1280 mg/kg 1200 mg/kg	- -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
benzyl alcohol	Skin – mild irritant Skin – Moderate irritant Skin – Moderate irritant	Man Pig Rabbit	- - -	48 hours 16 milligrams 100 Percent 24 hours 100 milligrams	- - -
titanium dioxide	Skin – Mild Irritant	Human	-	72 hours 300 Micrograms Intermittent	-
2,4,6-tris (dimethylaminomethyl)phenol	Eyes – Severe irritant Skin – mild irritant Skin – Severe irritant Skin – Severe irritant	Rabbit Rat Rat Rabbit	- - - -	24 hours 50 Micrograms 0.025 Mililiters 0.25 Mililiters 24 hours 2 milligrams	- - - -

Sensitization

No specific data.

Mutagenicity

No specific data.

Carcinogenicity

No specific data.

Classification

Product/ingredient name	OSHA	IARC	NTP
titanium dioxide	-	2B	-

Reproductive toxicity

No specific data.

Teratogenicity

No specific data.

Specific target organ toxicity (single exposure)

No specific data.

Specific target organ toxicity (repeated exposure)

No specific data.

Aspiration hazard

No specific data.

Information on the likely routes of exposure Not available.

Potential acute health effects

Eye contact No known significant effects or critical hazards.

Inhalation Harmful if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Skin contact No known significant effects or critical hazards.

Ingestion Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact No specific data.

Inhalation No specific data.

Skin contact No specific data.

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.

Long term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Potential chronic health effects

No specific data.

General No known significant effects or critical hazards.

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 Dermal	1969.5 mg/kg 8745 mg/kg
Inhalation (dusts and mists)	3.551 mg/l

12. ECOLOGICAL INFORMATION

Toxicity

Product/ingredient name	Result	Species	Exposure
benzyl alcohol	Acute LC50 460000µg/l Fresh water	Fish – Pimephales, promelas – Juvenile (Fledgling, Hatchling, Weanling)	96 hours
titanium dioxide	Acute LC50 1000000µg/l Marine water	Fish – Fundulus heteroclitus	96 hours

Persistence and degradability

No specific data.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
benzyl alcohol	0.87	-	low
titanium dioxide	-	352	low
2,4,6-tris 9dimethylaminomethyl) phenol	0.219	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) Not available.

Other adverse effects No known significant effects or critical hazards.

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.

RCRA classification Not available.

14. TRANSPORT INFORMATION

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN Number	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.
Additional information	-	-	-	-	-

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.

15. REGULATORY INFORMATION

U.S. Federal regulations **TSCA 8(a) PAIR**: Siloxanes and Silicones, di-Me, reaction products with silica
TSCA 9(a) CDR Exempt/partial exemption: Not determined
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

SARA 302/304

Composition/information on ingredients No products were found.

SARA 304 RQ Not applicable

SARA 311/312

Classification Immediate (acute) health hazard

Composition / information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
benzyl alcohol	1-5	No.	No.	No.	Yes.	No.
titanium dioxide	1-5	No.	No.	No.	No.	Yes
2,4,6-tris (dimethylaminomethyl)phenol	1-5	No.	No.	No.	Yes.	No.

State regulations

Massachusetts The following components are listed: BARIUM SULFATE; BENZYL ALCOHOL; TETRAETHYLENE PENTAMINE; CALCIUM CARBONATE; TITANIUM DIOXIDE

New York None of the components are listed.

New Jersey The following components are listed: BARIUM SULFATE; SULFURIC ACID; BARIUM SALT (1:1); PROPYLENE GLYCOL; 1,2-PROPANEDIOL; TETRAETHYLENEPENTAMINE; 1,2-ETHANEDIAMINE, N-(2-AMINOETHYL)N'-[2-[(2-AMINOETHYL)AMINO]ETHYL]-; CALCIUM CARBONATE; LIMESTONE; TITANIUM DIOXIDE; TITANIUM OXIDE (TiO2)

Pennsylvania The following components are listed: BARIUM SULFATE; 1,2-PROPANEDIOL; BENZENEMETHANOL; 1,2-ETHANEDIAMINE, N-(2-AMINOETHYL)-N'[2-[(2-AMINOETHYL)AMINO]ETHYL]-; LIMESTONE; TITANIUM OXIDE (TiO2)

Minnesota Hazardous Substances None of the components are listed.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient Name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
titanium dioxide	Yes.	No.	No.	No.
crystalline silica non-respirable	Yes.	No.	No.	No.

Canada inventory All components are listed or exempted.

International regulations

International lists

Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Phillipines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Substances of very high concern None of the components are listed.

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 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

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SAFETY DATA SHEET

1. PRODUCT and COMPANY IDENTIFICATION

PRODUCT NAME: **PVC TOUCH UP COMPOUND EXTERIOR GRAY** **PRINT DATE: May 4, 2020**
PRODUCT CODE: **45-1**

RECOMMENDED USE: Industrial Paint
USES ADVISED AGAINST:

MANUFACTURER: **Pruett-Schaffer Chemical Company**
3327 Stafford Street
Pittsburgh, PA 15204
Phone: 412-771-2000 Fax: 412-771-2205

EMERGENCY PHONE 1-800-633-8253 (PERS)

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 (OSHA HCS):

- Highly Flammable Liquid and Vapor (Category 2), H225 (chapter 2.6)
- Health Hazards:

Acute toxicity -		Category 4	H302 + H312 + H332
Oral	(chap. 3.1)		
Dermal	(chap. 3.1)		
Inhalation	(chap. 3.1)		
Specific target organ toxicity – repeated exposure		Category 2	H373
Eye damage/irritation-	(chap. 3.3)	Category 2B	H320
Aspiration hazard -	(chap. 3.10)	Category 1	H304
Chronic aquatic toxicity -	(chap. 4.1)	Category 3	H412

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS:

- **PICTOGRAMS:**

- **SIGNAL WORD:** **Danger**
- **HAZARD STATEMENT(S):**

H225	Highly flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

- **PRECAUTIONARY STATEMENTS:**
  GENERAL HAZARDS:

P101/P103	If medical advice is needed, have product container or label at hand. Read label before use.

2. HAZARDS IDENTIFICATION – cont.

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 – cont.

- **PRECAUTIONARY STATEMENTS – cont.:**

PHYSICAL HAZARDS:

P210	Keep away from heat, sparks, open flames and hot surfaces. – NO SMOKING.
P211	Do not spray on an open flame or other ignition source.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical equipment/lighting/ventilation equipment.
P242	Use only non-sparking tools.
P260	Do not breath dust/fume/gas/mist/spray/vapors.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash face, hands and any exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear face protection, protective gloves, protective clothing.
P284	Wear respiratory protection.

HEALTH HAZARDS:

P308/P313	If exposed or concerned: Get medical advice.
P342/P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
P305/P351/P338	IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337/P313	If eye irritation persists: Get medical attention.
P304/P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303/P361/P353	IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing Rinse skin with soap and water.
P333/P313	If skin irritation or rash occurs: Get medical attention.
P301/P310	IF SWALLOWED: DO NOT INDUCE VOMITING. Immediately call a POISON CENTER or doctor.
P363	Wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS:

P391/P502	Collect spillage. Refer to manufacturer for information on recovery.

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

- May cause headache, dizziness, nausea, irritation of the nose, throat, and respiratory tract, and loss of coordination.
- Severe overexposure may produce anesthesia or unconsciousness.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

- Eye contact may cause irritation, redness, and tearing, and blurred vision.
- Skin contact may cause irritation and redness.
- Long term skin exposure may dry and defat the skin, causing cracking, and in severe cases, dermatitis.

2. HAZARDS IDENTIFICATION – cont.

GHS CLASSIFICATION IN ACCORDANCE WITH 29 CFR 1910 – cont.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE:

- Ingestion can cause gastrointestinal irritation, vomiting, nausea, and diarrhea.

HEALTH HAZARDS (ACUTE AND CHRONIC):

- Breathing high concentrations of aerosols or mists of this material may cause nausea and irritation of the nose, throat, and respiratory tract.
- Acute overexposure to solvent fumes during air drying of this product may cause headache, dizziness, nausea, and loss of coordination.
- Chronic overexposure to solvent fumes may cause central nervous system damage.

SIGNIFICANT DATA ON MIBK WITH POSSIBLE RELEVANCE TO HUMANS

In tests with laboratory animals, methyl isobutyl ketone (MIBK) produced evidence of embryo fetal toxicity at exposure levels which were toxic to mothers, but no evidence was obtained for teratogenicity, or for embryo fetal toxicity, at levels which did not affect the mothers. Results from five mutagenicity assays with different genetic end-points indicate that MIBK does not produce activity typical of that of chemical mutagens. Additional studies have shown that MIBK is toxic if aspirated. It is known to enhance the neurotoxicity of linear 6 carbon solvents.

CARCINOGENICITY:

- NTP: No IARC MONOGRAPHS: Yes OSHA REGULATED: No

CHRONIC EFFECTS OF CARBON BLACK OVEREXPOSURE

- The carbon black component of this formula is an IARC listed Group 2B substance, considered by IARC to be a "Possible human carcinogen". Carbon black is not designated as a carcinogen by the U.S. National Toxicology Program (NTP) or the U.S. Occupational Safety and Health Administration (OSHA). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies carbon black as A4, "Not classifiable as a human carcinogen". Carbon black is not presently listed by California Proposition 65, but the California Office of Environmental Health Hazard Assessment (OEHHA) published on October 29, 1999 a Notice of Intent to List "Carbon Black (airborne particles of respirable size)" as a "substance known to the State to cause cancer".

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS

This product may contain trace amounts of residual vinyl acetate. Vinyl acetate has been identified by IARC as a potential human carcinogen. Lifetime exposure to high vapor concentrations (600 ppm) of vinyl acetate caused malignant and benign tumors of the respiratory tract of rats, but not of mice; this response possibly being associated with the irritant effect. Vinyl acetate has been tested for carcinogenic potential in rats in two separate drinking water studies. In one study in which animals were exposed to concentrations up to 0.5% in water, there was no evidence of carcinogenicity. In the second study, conducted at higher concentrations (up to 1% in water), evidence of cancer in the stomach and oral cavities was observed. There is no evidence that vinyl acetate has caused cancer in humans. There should be minimal risk when used with ventilation adequate to keep the atmospheric concentration of vinyl acetate below the recommended exposure limit.
Male rats receiving vinyl acetate at high concentrations in drinking water (0.5%) for two Generations possible demonstrated a decreased ability to produce offspring.

2. HAZARDS IDENTIFICATION – cont.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

- Overexposure to solvent fumes may aggravate anesthesia, respiratory tract disease or pre-existing lung disorders, nausea, and vomiting.

3. COMPOSITION/INFORMATION ON INGREDIENTS

REPORTABLE COMPONENTS			CAS #	VAPOR PRESSURE mm Hg	@ TEMP. DEGREE F	WEIGHT PERCENT
*Methyl Isobutyl Ketone 4-Methyl-2-pentanone (MIBK)	ACGIH TWA8 TLV: OSHA TWA8 PEL: OSHA:	50 ppm, or 205 mg/m3, 75 ppm STEL. 100 ppm mg/m3. 50 ppm, TWA8, 205 mg/m3, TWA8, 75 ppm STEL, 300 mg/m3 STEL.	108-10-1	15	68	32.43
*Toluol (methyl benzene)	ACGIH TWA TLV: OSHA PEL:	50 ppm. 200 ppm TWA, 150 ppm STEL.	108-88-3	26	77	24.11
Vinyl Chloride - Vinyl Acetate - Maleic Acid Polymer			9003-22-9			21.31
Titanium Dioxide, Inert pigment	ACGIH TLV: OSHA PEL: OTHER TLV:	10 mg/m3 15 mg/m3 10 mg TWA.	13463-67-7	0	0	6.44
Diisodecyl Phthalate			68515-49-1			5.54
Mica, inert pigment	ACGIH TLV: OSHA PEL:	3 mg/m3 20 Mppcf	12001-26-2	0	0	3.82
Amorphous Fused Silica	ACGIH TLV: OSHA PEL:	20 Mppcf 20 Mppcf	68909-20-6	0	0	1.95
Carbon Black Pigment	ACGIH TLV: OSHA PEL:	3.5 mg/m3 TWA 3.5 mg/m3 TWA	1333-86-4	0	0	1.67
Organoclay			68911-87-5			1.44
Yellow Iron Oxide Inert pigment	ACGIH TLV: OSHA PEL:	5 mg/m3 10 mg/m3	51274-00-1	0	0	0.33
Red Iron Oxide Inert pigment	ACGIH TLV: OSHA PEL:	5 mg/m3 10 mg/m3	1309-37-1	0	0	0.16
Acetone	ACGIH TLV: OSHA PEL:	500 ppm TWA, 750 ppm STEL (C) 1000 ppm TWA.	67-64-1	157	68	0.11
Vinyl Acetate as an impurity in raw material	ACGIH: OSHA:	10 ppm TWA8, 15 ppm STEL. 10 ppm TWA8, 20 ppm STEL.	108-05-4	0	0	0.02

3. COMPOSITION/INFORMATION ON INGREDIENTS

* Indicates toxic chemical (s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

Legend:	C	Ceiling Limit	Mppcf	Million Particles per Cubic Foot
	S	Skin Limit	TWA	8 HR Time Weighted Average
	STEL	Short Term Exposure Limit		

4. FIRST-AID MEASURES

Inhalation

Move victim to fresh air. Give artificial respiration if victim is not breathing and seek immediate medical attention. NOTE: Use supplied-air respirator for rescue in enclosed areas. If symptoms persist, call a physician.

Skin

Wash skin immediately with soap and plenty of water. Remove all contaminated clothes and shoes. Avoid repeated contact with substance. If skin irritation occurs, call a physician.

Eyes

Flush with large amounts of tepid water for at least 15 minutes, and seek medical advice. Call a physician immediately.

Ingestion

Do NOT induce vomiting. If aspirated, material can cause chemical pneumonitis or pulmonary edema. Call a physician or poison center immediately. If person is drowsy or unconscious and vomiting, place on the left side with head down, and seek immediate medical attention.

5. FIRE-FIGHTING MEASURES

NFPA: **Health:** 2 **Flammability:** 3 **Instability:** 1

FLASH POINT: 41° F METHOD USED: TCC

FLAMMABLE LIMITS IN AIR BY VOLUME: LOWER: 1.2 UPPER: 12.8

Suitable Extinguishing Media:

Use CO2 or dry chemical for small fires. Use alcohol type aqueous film forming foam for large fires.

Special Exposure Hazards Arising from the Substance or Mixture:

Under conditions giving incomplete combustion, hazardous gases produced may consist of carbon monoxide. Vapors are heavier than air and may spread along floors.
Oxidizing chemicals may accelerate the burning rate in a fire situation. If potential for exposure to vapors or Products of combustion exists, wear full fire-fighting turnout gear and NIOSH approved self-contained breathing apparatus.

5. FIRE-FIGHTING MEASURES – cont.

Unusual Fire and Explosion Hazards:

- Pressure may build up in tightly closed containers exposed to fire which may result in rupture.
- Vapors may travel a considerable distance to a source of ignition or collect in low areas.

Environmental Precautions:

Dike and collect water used to fight fire.

Advice for Firefighters:

- Wear self-contained breathing apparatus.
- Wear full chemical protective clothing.
- Wear positive pressure self-contained breathing apparatus (SCBA).
- Keep onlookers away.
- Dike runoff to prevent entry into sewers, storm drains and watercourses.
- USE CAUTION AFTER FIRE IS EXTINGUISHED, VAPORS OR LIQUID MAY REIGNITE.
- Use water spray to cool containers exposed to fire**.**
- Notify appropriate State and Local Agencies.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

- Wear appropriate protective clothing including gloves.
- Use respirator.
- Provide ventilation.
- Only touch damaged containers or spilled material when wearing appropriate protective clothing and gloves.

Emergency Procedures

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Recover free liquid by shoveling into container using non-sparking tools or add absorbent such as sand or earth to spill and sweep up.

Environmental Precautions:

- Dike to prevent entry into sewers or surface waters.
- Notify proper authorities if spill contaminates land or waterways.

Cleanup

- Store soaked rags or absorbent material in airtight containers to prevent spontaneous combustion of material.
- Absorbent materials may emit flammable vapors.
- Dispose of in chemical landfill or incinerate assuring conformity to all applicable Federal, State and Local governing regulations.

7. HANDLING and STORAGE

Handling

- Keep containers away from flame, heat and other ignition sources – No Smoking.
- Use non-sparking alloy tools and explosion-proof equipment for handling.
- Bond and ground equipment in accordance with OSHA 29, CFR 1910.106 and NFPA 77, when transferring from one vessel to another.

7. HANDLING and STORAGE – cont.

Handling – cont.

- Do not inhale vapors or mists.
- Use with adequate ventilation AND wear a respirator.

Other Handling Precautions

- Empty containers retain product residue and may be dangerous.
- Do not pressurize, cut, weld, braze, solder, drill or grind on or near containers whether full or empty.
- Do not reuse containers without professional reconditioning and testing.

Storage

- Store away from flame, heat, sparks or other sources of ignition.
- Store inside away from extreme temperature variations.
- Protect containers from physical damage.
- Keep containers tightly closed when not in use.
- Store in a well-ventilated place.
- Do not remove warning labels from containers.

Incompatible materials or ignition sources

- Keep away from incompatible materials, especially food or animal feed.
- Keep away from flame, heat, sparks or other sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures/Controls:

- Use good general mechanical ventilation and local exhaust adequate to reduce the concentration of vapors or mists of the listed hazardous materials to below the Threshold Limit Value (s) and the Lower Explosion Limit.
- Ventilation equipment must be explosion-proof.

Personal Protective Equipment:

Pictograms

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment; Mine Safety Appliance #475217 pressure/demand air-supplied respirator or equivalent.
- Follow the OSHA respirator regulations found in 29 CFR 1910.134.
- Use Mine Safety Appliance respirator #448849 with organic vapor cartridge and mist filter, or equivalent, if air monitoring demonstrates that the concentration of listed hazardous materials exceeds the recommended TLV's.

Eye / Face

- Wear safety goggles or full face shields, as necessary.

Hands

- Wear protective gloves –chemically resistant type.

Skin / Body

- Use impervious apron or coveralls to prevent contaminating street clothes which may result in prolonged exposure. The use of head caps or helmets is recommended.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION – cont.

General Industrial Hygiene Considerations:

- Handle in accordance with good industrial hygiene and safety practice.
- Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.
- Safety shower and eye wash should be available close to work areas.
- Remove saturated clothing or shoes at once; launder all used clothing before reuse.

Environmental Exposure Controls:

- Follow best practice for site management and disposal of waste. Avoid release to the environment.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE:	134° F - 241° F	SPECIFIC GRAVITY:	1.04
VAPOR DENSITY:	Heavier than air	EVAPORATION RATE:	Slower than ether.
COATING VOC:	4.89 lb/gal	MATERIAL VOC:	4.88 lb/gal

ORGANIC SOLVENT, PERCENT BY WEIGHT: 56.547
ORGANIC SOLVENT, PERCENT BY VOLUME: 70.911

COATING DENSITY, LB/GAL: 8.635
SOLUBILITY IN WATER: Insoluble
APPEARANCE and ODOR: Viscous, opaque liquid with a paint thinner-like odor.

10. STABILITY AND REACTIVITY

Reactivity:

- No dangerous reaction known under conditions of normal use.

Chemical Stability:

- Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions:

- Hazardous polymerization will not occur.

Conditions to Avoid:

- Sources of ignition.
- Poor ventilation
- Corrosive atmosphere
- Liquids which may damage containers.

Incompatible Materials to Avoid:

- Oxidizing agents, strong acids and bases.

Hazardous Decomposition or By-Products:

- In case of fire, carbon dioxide, carbon monoxide and other toxic gases may be produced.

11. TOXICOLOGICAL INFORMATION

Target Organs: Central Nervous System (CNS)

Routes of Entry Exposure: Inhalation, Skin, Eye, Ingestion

11. TOXICOLOGICAL INFORMATION – cont.

Carcinogenicity: NTP: No IARC MONOGRAPHS: Yes OSHA REGULATED: No

Substances Classified by IARC (International Agency for Research on Cancer): CAS #9003-22-9 Polyvinyl Chloride-Polyvinyl Acetate Copolymer: 3

Potential Health Effects:

Inhalation

Acute (Immediate) Breathing high concentrations of aerosols or mists of this material may cause nausea and irritation of the nose, throat, and respiratory tract.
Acute over exposure to solvent fumes during air drying of this product may cause headache, dizziness, nausea, and loss of coordination.
Severe overexposure may produce anesthesia or unconsciousness.

Chronic (Delayed) Chronic overexposure to solvent fumes may cause central nervous system damage.

Skin

Acute (Immediate) Skin contact may cause skin irritation and redness.

Chronic (Delayed) Long term skin exposure may dry and defat the skin causing cracking, and in severe cases dermatitis.

Eye

Acute (Immediate) Eye contact may cause irritation, redness, tearing and blurred vision.

Chronic (Delayed) No data available.

Ingestion

Acute (Immediate) Ingestion can cause gastrointestinal irritation, vomiting, nausea, and diarrhea.

Chronic (Delayed) No data available.

Medical Conditions Generally aggravated by exposure: Overexposure to solvent fumes may aggravate anesthesia, respiratory tract disease or pre-existing lung disorders, nausea and vomiting.

12. ECOLOGICAL INFORMATION

(1) MIBK – CAS #108-10-1:

Toxicity to fish: LC50 (Danio rerio (zebra fish)) 96 hours: > 100 mg/l; static test.
(literature value)

Toxicity to aquatic Invertebrates: EC50 (Daphnia magna (Water flea)) 48 hours: > 100 mg/l; static test.
(literature value)

Toxicity to algae: No data available.

Chronic toxicity to Aquatic Invertebrates: NOEC (Daphnia magna (Water flea)) 21 d: > 10 – 100 mg/l; semi-static test; OECD Test Guideline 211.
(literature value)

Biodegradation: Readily biodegradable.
OECD Test Guideline 301F (28 d): > 60%.
(literature value)

Bioaccumulation: No bioaccumulation is to be expected (Log POW <= 4).

12. ECOLOGICAL INFORMATION – cont.

(1) MIBK – CAS #108-10-1 – cont.:

Mobility in soil: No data available.

Other adverse effects: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

(2) Toluol – CAS #108-88-3:

Chronic effect Carcinogenicity:

ACGIH: A4-Not classifiable as a Human Carcinogen.
OSHA: Possible select carcinogen.
IARC: Group 3 carcinogen.
Epidemiology: Not available.
Teratogenicity: Teratogenic effects have occurred in experimental animals.
Reproductive Effects: Adverse reproductive effects have occurred in experimental animals.
Neurotoxicity: Not available.
Mutagenicity: Not available.
Ecotoxicity: LC50 (96 hr.).
Fish: 7.3～22.8 mg/l EC50 (48 hr.).
Water flea: Bioconcentration factor (BCF): 1.67～380.

(3) VINYL CHLORIDE – VINYL ACETATE – MALEIC ACID POLYMER – CAS #9003-22-9:

- **Persistence and Degradability:** No data available.
- **Bioaccumulative Potential:** No data available.

13. DISPOSAL CONSIDERATIONS

√ STORE soaked rags or absorbent material in airtight containers to prevent spontaneous combustion of material.

√ Absorbent materials may emit flammable vapors. Dispose of in chemical landfill or incinerate assuring conformity to all applicable local, State and Federal governing regulations.

14. TRANSPORT INFORMATION

Additional Hazardous Material Information:

SHIPPING INFORMATION:
UN / NA ID No.: **UN 1263**
DOT Hazard Class: **3 (Flammable Liquid)**
Packing Group: **II**
DOT Hazardous Material Proper Shipping Name: **Flammable Liquid, Paint**

15. REGULATORY INFORMATION

Shown here are the statutes and regulations that cover all of the components shown under Section 3 of this SDS with an asterisk.

I. UNITED STATES EPA SARA Title III: **Hazardous Components**

The Emergency Planning and Community Right-to-Know (EPCRA) of 1986, also known as SARA Title III, establishes emergency planning and reporting for industry and government, and gives communities the necessary tools for planning and responding to the potential release of hazardous waste.

Definition of terms:

SARA Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) passed October 17, 1986.
SARA amends the CERCLA, or Superfund.

15. REGULATORY INFORMATION – cont.

Definition of terms – cont.:

SARA Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) passed October 17, 1986.
SARA amends the CERCLA, or Superfund.

CERCLA Comprehensive Environmental Response, Compensation and Liability Act passed by the U.S. Congress in 1980 to help solve the problems of hazardous waste sites.

SARA § 302 – Extremely Hazardous Substances **(EHS)** with threshold planning quantity **(TPQ)** listed in pounds.
*indicates 10000 LB TPQ if not volatile.

Components	CAS #	Component EHS	Component TPQ
MIBK	108-10-1	No chemicals in this material are subject to the reporting requirements of SARA § 302	

SARA § 304 – CERCLA Reportable + § 302 with Reportable Quantity **(RQ)**.
**indicates statutory RQ.

Components	CAS #	Typical Value	Component RQ
MIBK	108-10-1	5,000 Lb.	100%

SARA § 110 - Superfund Site Priority Contaminant List

None of the ingredients in our Sec. 3 are listed for § 110.

II. U.S. EPA SARA Title III Hazard Categories § 311/312 : Hazard Categories

The material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

Chemical Name	CAS No.		
MIBK	108-10-1	[X] Yes [ ] No	Acute (immediate) Health Hazard
		[X] Yes [ ] No	Chronic (delayed) Health Hazard
		[X] Yes [ ] No	Fire Hazard
		[ ] Yes [X] No	Reactive Hazard
		[ ] Yes [X] No	Sudden Release of Pressure Hazard
Toluol	108-88-3	Not listed for § 311/312.	
Vinyl Chloride-Vinyl Acetate-Maleic Acid Polymer	9003-22-9	Not listed for § 311/312.	

SARA § 313 – Toxic Release Inventory **(TRI)**: - Cat indicates a member of a chemical category.

Components	CAS #	Typical Value
MIBK	108-10-1	<= 100.0%
Toluol	108-88-3	Not listed for § 313.
Vinyl Chloride-Vinyl Acetate-Maleic Acid Polymer	9003-22-9	Not listed for § 313.

SARA § 355 – Extremely Hazardous Substances.

Components	CAS #	Typical Value

No ingredients in Sec. 3 listed for § 355.

15. REGULATORY INFORMATION – cont.

III. U.S. EPA TOXIC SUBSTANCES CONTROL ACT of 1976 (TSCA):

Components	CAS #	Typical Value
MIBK	108-10-1	Not listed.
Toluol	108-88-3	Not listed.
Vinyl Chloride-Vinyl Acetate-Maleic Acid Polymer	9003-22-9	Substance is listed for TSCA.

IV. COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION and LIABILITY ACT (CERCLA) passed by U.S. Congress in 1980:

Components	CAS #	Typical Value	Component RQ
No ingredients in Sec. 3 listed			

V. OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200:

Components	CAS #	Listed
No ingredients in Sec. 3 listed		

VI. CARCINOGENIC CATEGORIES, EPA,, TLV (Threshold Limit Value established by ACGIH), NIOSH-Ca, OSHA-Ca:

Components	CAS #	Listed
No ingredients in Sec. 3 listed		

VII. U.S. STATE REGULATIONS:

Chemicals associated with the product which are subject to the state Right-To-Know Regulations, listed with the applicable state(s):

		--------- Listed on State Right-To-Know ----------							
Component	**CAS No.**	**PA**	**NY**	**NJ**	**IL**	**MA**	**MN**	**RI**	**FL**
MIBK	108-10-1	YES							
Toluol (methyl benzene)	108-88-3	YES	NO	YES	NO	YES	YES	NO	YES

VIII. CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

Chemical Name	CAS No.	Listed
MIBK	108-10-1	No warning shown on MIBK SDS.
Toluol	108-88-3	WARNING: This product contains Toluene, a chemical known to the state of California to cause birth defects or other reproductive harm.
Vinyl Chloride-Vinyl Acetate-Maleic Acid Polymer	9003-22-9	PVC resin contains minor amounts (< 1 ppm on average; 0.0001%) of residual vinyl chloride monomer. Vinyl chloride, CAS #75-01-4, is listed as a carcinogen under Proposition 65.
Carbon Black pigment	1333-86-4	WARNING! This product contains a chemical known to the State of California to cause cancer.

15. REGULATORY INFORMATION – cont.

IX. INTERNATIONAL REGULATIONS:

A. Chemicals associated with the product are listed on the chemical inventories of the following countries or qualifies as an exemption:

		Components		
		MIBK	TOLUOL	VINYL CHLORIDE-VINYL ACETATE-MALEIC ACID POLYMER
		CAS # 108-10-1	CAS # 108-88-3	CAS # 9003-22-9
Australia	**Inventory of Chemical Substances (AICS)**	YES		
Japan	**Inventory of Existing and New Chemical Substances (ENCS)**	YES		
Japan (ISHL) Inventory	**Industrial Safety & Health Law** YES			
Canada	**Domestic Substances List (DSL) Inventory**	YES	YES	YES
Canada	**Non-Domestic Substance Listing (NDSL)**	NO	YES	NO
European	**Inventory of Existing Commercial Chemical Substances (EINECS)**	YES		
Philippines	**Inventory of Chemicals/ Chemical Substances (PICCS)**	YES		
Korea	**Existing Chemicals Inventory (KECI)**	YES		

B. WHMIS Classification:

Components	CAS #	Listed
MIBK	108-10-1	Class B, Division 2: Flammable Liquid Class D, Division 2, Subdivision A: Very toxic material Class D, Division 2, Subdivision B: Toxic material
Toluol	108-88-3:	

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

Risk Phrases : R 10 Flammable.

R 20 Harmful by inhalation.

Safety Phrases : S 9 Keep container in a well-ventilated place.
S 16 Keep away from sources of ignition - No smoking.
S 25 Avoid contact with eyes. S 29 Do not empty into drains.
S 33 Take precautionary measures against static discharges.

15. REGULATORY INFORMATION – cont.

B. WHMIS Classification – cont.:

Components	**CAS #**	**Listed**
Toluol – cont.	108-88-3:	

WGK (Water Danger/Protection)

CAS# 108-88-3: 2

United Kingdom Occupational Exposure Limits

CAS# 108-88-3: OES-United Kingdom, TWA 50 ppm TWA; 191 mg/m3 TWA.
CAS# 108-88-3: OES-United Kingdom, STEL 150 ppm STEL; 574 mg/m3 STEL.

CANADA

CAS#100-42-5 is listed on Canada's DSL/NDSL list.
This product has a WHMIS classification of B2, D2A (99%)/B3, D2A (100%). CAS# 105-05-5 is not listed on Canada's Ingredient Disclosure List.

16. OTHER INFORMATION

HMIS III rating:

Health: 2 Flammability: 3 Reactivity: 0 Physical Hazard: C & H

HMIS III uses a numbering scale ranging from 0 to 4 to indicate the degree of hazard. A value of 0 means that the substance possesses essentially no hazard; a rating of 4 indicates extreme danger. The HMIS III system was designed to communicate workplace hazard information to employees who handle hazardous chemicals.

SDS Prepared By: Pruett-Schaffer Chemical Corporation

Last Revision Date: May 1, 2020
Preparation Date: May 4, 2020

Disclaimer/Statement of Liability

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Key to abbreviations

NDA = No data available.