

# SAFETY DATA SHEET



The information in this Safety Data Sheet is required pursuant to Hazardous Product Regulations 2015.

Date of issue/Date of revision : 8 September 2023

Version 11.01

## Section 1. Identification

Product name : KEELock HI-SOLIDS EPOXY 9394

Product code : KL96009394

Other means of identification : Not available.

Product type : Liquid.

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

Product use : Industrial applications, Used by spraying.

Use of the substance/  
mixture : Coating.

Uses advised against : Not applicable.

Supplier : PPG Architectural Coatings Canada, Inc.  
1550, rue Ampère, bureau 500  
Boucherville (Québec) J4B 7L4  
Canada  
+1 450-655-3121

PPG Industries, Inc.  
One PPG Place  
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)  
(514) 645-1320 (Canada)  
SETIQ Interior de la República: 800-00-214-00 (México)  
SETIQ Ciudad de México: (55) 5559-1588 (México)

Technical Phone Number : 888-977-4762

## Section 2. Hazard identification

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
SKIN SENSITIZATION - Category 1B  
CARCINOGENICITY - Category 1  
TOXIC TO REPRODUCTION - Category 2  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1  
Health Hazards Not Otherwise Classified - Category 1

## Section 2. Hazard identification

This product contains TiO<sub>2</sub> which has been classified as a GHS Carcinogen Category 2 based on its IARC 2B classification. For many products, TiO<sub>2</sub> is utilized as a raw material in a liquid coating formulation. In this case, the TiO<sub>2</sub> particles are bound in a matrix with no meaningful potential for human exposure to unbound particles of TiO<sub>2</sub> when the product is applied with a brush or roller. Sanding the coating surface or mist from spray applications may be harmful depending on the duration and level of exposure and require the use of appropriate personal protective equipment and/or engineering controls (see Section 8).

### GHS label elements

#### Hazard pictograms



#### Signal word

: Danger

#### Hazard statements

: Flammable liquid and vapor.  
 Causes skin irritation.  
 May cause an allergic skin reaction.  
 Causes serious eye irritation.  
 May cause cancer.  
 Suspected of damaging fertility or the unborn child.  
 Causes damage to organs through prolonged or repeated exposure. (hearing organs)  
 Prolonged or repeated contact may dry skin and cause irritation.

### Precautionary statements

#### Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

#### Response

: IF exposed or concerned: Get medical advice or attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

#### Storage

: Store locked up.

#### Disposal

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

#### Supplemental label elements

: Sanding and grinding dusts may be harmful if inhaled. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Wash thoroughly after handling. Emits toxic fumes when heated.  
 Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 34.3% (oral), 45.7% (dermal), 77.2% (inhalation)

## Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Product name	: KEELock HI-SOLIDS EPOXY 9394
Other means of identification	: Not available.

### CAS number/other identifiers

Ingredient name	Synonyms	% (w/w)	CAS number
Bis-[4-(2,3-epoxypropoxy)phenyl]propane	2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane; Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-; Bisphenol A diglycidyl ether; Bisphenol A, diglycidyl ether; Bis-[4-(2,3-epoxypropoxy)phenyl]propane; 2,2-bis[4-(2,3-epoxypropoxy)phenyl]propane; Propane, 2,2-bis(p-(2,3-epoxypropoxy)phenyl)-; diglycidyl ether of bisphenol-A; 2,2-bis(4-hydroxyphenyl)propane bis(2,3-epoxypropyl) ether; Araldite; DIPHENYLOL PROPANE DIGLYCIDYL ETHER	15 - 40	1675-54-3
crystalline silica, respirable powder (<10 microns)	alpha-quartz; Silica, crystalline (quartz); Silica, Crystalline Quartz; SILICA, CRYSTALLINE, QUARTZ; Silica-Crystalline, Quartz; Silica - Crystalline Quartz; Silica-Crystalline : Quartz; Silica, crystalline - quartz	10 - 30*	14808-60-7
diiron trioxide	Iron oxide (Fe <sub>2</sub> O <sub>3</sub> ); Iron oxide; C.I. Pigment Red 101; Ferric oxide; Iron oxide, anhydrous; Iron oxide, red; Iron sesquioxide; Iron trioxide; Iron oxide dust and fume (as Fe); Rouge; iron oxide dust and fume	5 - 10*	1309-37-1
1-methoxy-2-propanol	monopropylene glycol methyl ether; 1-methoxypropan-2-ol; 2-Propanol, 1-methoxy-; Propylene glycol monomethyl ether; Dowtherm 209; Propylene glycol methyl ether; 1-Methoxy-2-hydroxypropane; 2-Methoxy-1-methylethanol; PGME; mixture containing by weight: — 69 % or more but not more than 71 % of 1-methoxypropan-2-ol (CAS RN 107-98-2), — 29 % or more but not more than 31 % of 2-methoxy-1-methylethyl acetate (CAS RN 108-65-6); methoxyisopropanol	1 - 5*	107-98-2
n-butyl acetate	Acetic acid, butyl ester; Butyl Acetate; n-Butyl-acetate; Butyl ethanoate; n-Butyl ester of acetic acid; product composed of hydrocarbons (predominantly paraffinic and naphthenic) and n-butyl acetate;	1 - 5*	123-86-4

## Section 3. Composition/information on ingredients

oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	1-butyl acetate; 1-Acetoxybutane; Butyl ester, Acetic acid; normal butyl acetate; Acetic acid, n-butyl ester	1 - 5*	68609-97-2
xylene	Oxirane, 2-[(C12-14-alkyloxy)methyl] derivs.; Alkyl (C12-C14) Glycidyl Ether; Oxirane, mono[(C12-14-alkyloxy)methyl] derivatives; (C12-14) Alkylglycidyl ether; Oxirane, mono((C12-14-alkyloxy)methyl) derivatives; Alkyl -C12-14-glycidyl ether; oxirane, mono[(C12-14-alkyloxy)methyl] derivs; Oxirane, mono[(alkyl(C=12-14)oxy)methyl] derivs.; Glycidol derivatives; C12-14-ALKYL GLYCIDYL ETHER; Alkyl (C12, C14) glycidyl ether	1 - 5*	1330-20-7
ethylbenzene	Benzene, dimethyl-; Xylol; xylene, mixed isomers, pure; xylene, crude; Benzene, dimethyl-,; Xylene (mixed); Xylenes; Dimethylbenzene; XYLENES (Isomer Mixture); xylene (mixture), including m-xylene, o-xylene, p-xylene; XYLENE, mixture of isomers	0.5 - 1.5*	100-41-4
crystalline silica, respirable powder (>10 microns)	Benzene, ethyl-; Phenylethane; Ethylbenzol; photosensitive emulsion consisting of cyclized polyisoprene containing: — 55 % or more but not more than 75 % by weight of xylene (CAS RN 1330-20-7) and — 12 % or more but not more than 18 % by weight of ethylbenzene (CAS RN 100-41-4); EB; Mono-(or di-) methyl (ethyl,bromoallyl, bromopropoxyloxycarbonyl or chloropropoxyloxycarbonyl) benzene	0.1 - 1*	14808-60-7
titanium dioxide	alpha-quartz; Silica, crystalline (quartz); Silica, Crystalline Quartz; SILICA, CRYSTALLINE, QUARTZ; Silica-Crystalline, Quartz; Silica - Crystalline Quartz; Silica-Crystalline : Quartz; Silica, crystalline - quartz	0.1 - 1*	13463-67-7

### Section 3. Composition/information on ingredients

toluene	oxide, other than those of heading 3206 11 00  Benzene, methyl-; Methylbenzene; Toluol; Phenyl methane; Methyl benzol; toluene, pure; preparation consisting of: — 80 % or more but not more than 90 % by weight of (S)-hydroxy-3-phenoxy-benzeneacetonitrile (CAS RN 61826-76-4) and — 10 % or more but not more than 20 % by weight of toluene (CAS RN108-88-3); toluene, crude; preparation containing by weight: — 15 % or more but not more than 60 % of styrene butadiene copolymers or styrene isoprene copolymers and — 10 % or more but not more than 30 % of pinene polymers or pentadiene copolymers dissolved in: — methyl ethyl ketone (CAS RN 78-93-3) — heptane (CAS RN 142-82-5), and — toluene (CAS RN 108-88-3) or light aliphatic solvent naphta (CAS RN 64742-89-8); methacide; Cuminyll alcohol	0.1 - 1*	108-88-3
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\*Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

SUB codes represent substances without registered CAS Numbers.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

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

### Section 4. First-aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

#### Description of necessary first aid measures

- Eye contact** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

#### Most important symptoms/effects, acute and delayed

##### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.

## Section 4. First-aid measures

**Ingestion** : No known significant effects or critical hazards.

### Over-exposure signs/symptoms

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

**Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

**Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

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

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon oxides  
halogenated compounds  
metal oxide/oxides

## Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

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

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or

## Section 7. Handling and storage

an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

### Special precautions

: Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Vapors are heavier than air and may spread along floors. If this material is part of a multiple component system, read the Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

### Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.


### Conditions for safe storage, including any incompatibilities

: Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store in a segregated and approved area. 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. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. 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.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
 Bis-[4-(2,3-epoxipropoxy)phenyl]propane crystalline silica, respirable powder (<10 microns)	None. <b>CA British Columbia Provincial (Canada, 6/2022). [Silica, Crystalline - alpha quartz and Cristobalite Respirable]</b> TWA: 0.025 mg/m <sup>3</sup> 8 hours. Form: Respirable <b>CA Ontario Provincial (Canada, 6/2019). [Silica, Crystalline (Quartz/Tripoli)]</b> TWA: 0.1 mg/m <sup>3</sup> 8 hours. Form: Respirable <b>CA Quebec Provincial (Canada, 6/2022). [Silica Crystalline -Quartz]</b> TWAEV: 0.1 mg/m <sup>3</sup> 8 hours. Form: Respirable dust. <b>CA Alberta Provincial (Canada, 6/2018).</b> 8 hrs OEL: 0.025 mg/m <sup>3</sup> 8 hours. Form: Respirable particulate <b>CA Saskatchewan Provincial (Canada, 7/2013).</b> TWA: 0.05 mg/m <sup>3</sup> 8 hours. Form: respirable fraction <b>CA Alberta Provincial (Canada, 6/2018).</b> 8 hrs OEL: 5 mg/m <sup>3</sup> , (as Fe) 8 hours. Form:
diiron trioxide	



## Section 8. Exposure controls/personal protection

1-methoxy-2-propanol

Respirable

**CA Ontario Provincial (Canada, 6/2019).**

TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable particulate matter.

**CA British Columbia Provincial (Canada, 6/2022).**

TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Total dust

**CA Quebec Provincial (Canada, 6/2022).**

TWAEV: 5 mg/m<sup>3</sup>, (as Fe) 8 hours. Form: dust and fume

**CA Saskatchewan Provincial (Canada, 7/2013).**

STEL: 10 mg/m<sup>3</sup>, (measured as Fe) 15 minutes. Form: dust and fume

TWA: 5 mg/m<sup>3</sup>, (measured as Fe) 8 hours. Form: dust and fume

**CA Alberta Provincial (Canada, 6/2018).**

15 min OEL: 553 mg/m<sup>3</sup> 15 minutes.

15 min OEL: 150 ppm 15 minutes.

8 hrs OEL: 369 mg/m<sup>3</sup> 8 hours.

8 hrs OEL: 100 ppm 8 hours.

**CA British Columbia Provincial (Canada, 6/2022).**

STEL: 100 ppm 15 minutes.

TWA: 50 ppm 8 hours.

**CA Ontario Provincial (Canada, 6/2019).**

STEL: 100 ppm 15 minutes.

TWA: 50 ppm 8 hours.

**CA Quebec Provincial (Canada, 6/2022).**

STEV: 553 mg/m<sup>3</sup> 15 minutes.

STEV: 150 ppm 15 minutes.

TWAEV: 369 mg/m<sup>3</sup> 8 hours.

TWAEV: 100 ppm 8 hours.

**CA Saskatchewan Provincial (Canada, 7/2013).**

STEL: 150 ppm 15 minutes.

TWA: 100 ppm 8 hours.

n-butyl acetate

**CA Alberta Provincial (Canada, 6/2018).**  
**Skin sensitizer.**

15 min OEL: 950 mg/m<sup>3</sup> 15 minutes.

15 min OEL: 200 ppm 15 minutes.

8 hrs OEL: 713 mg/m<sup>3</sup> 8 hours.

8 hrs OEL: 150 ppm 8 hours.

**CA Saskatchewan Provincial (Canada, 7/2013).**

STEL: 200 ppm 15 minutes.

TWA: 150 ppm 8 hours.

**CA Ontario Provincial (Canada, 6/2019).**

**[butyl acetates, all isomers]**

STEL: 150 ppm 15 minutes.

TWA: 50 ppm 8 hours.

**CA British Columbia Provincial (Canada, 6/2022).** **[butyl acetate, all isomers]**

STEL: 150 ppm 15 minutes.

TWA: 50 ppm 8 hours.

## Section 8. Exposure controls/personal protection

oxirane, mono[(C12-14-alkyloxy)methyl] derivs.  
xylene

**CA Quebec Provincial (Canada, 6/2022).  
[butyl acetates (all isomers)]**

STEV: 150 ppm 15 minutes.  
TWAEV: 50 ppm 8 hours.

None.

**CA Alberta Provincial (Canada, 6/2018).  
[Dimethylbenzene (o,m & p isomers)]**

15 min OEL: 651 mg/m<sup>3</sup> 15 minutes.  
15 min OEL: 150 ppm 15 minutes.  
8 hrs OEL: 434 mg/m<sup>3</sup> 8 hours.  
8 hrs OEL: 100 ppm 8 hours.

**CA British Columbia Provincial (Canada,  
6/2022). [Xylene (o, m & p isomers)]**

STEL: 150 ppm 15 minutes.  
TWA: 100 ppm 8 hours.

**CA Quebec Provincial (Canada, 6/2022).  
[Xylene (o-,m-,p- isomers)]**

STEV: 651 mg/m<sup>3</sup> 15 minutes.  
STEV: 150 ppm 15 minutes.  
TWAEV: 434 mg/m<sup>3</sup> 8 hours.  
TWAEV: 100 ppm 8 hours.

**CA Ontario Provincial (Canada, 6/2019).  
[Xylene (o-, m-, p-isomers)]**

STEL: 150 ppm 15 minutes.  
TWA: 100 ppm 8 hours.

**CA Saskatchewan Provincial (Canada,  
7/2013). [Xylene (o, m-, p-isomers)]**

STEL: 150 ppm 15 minutes.  
TWA: 100 ppm 8 hours.

ethylbenzene

**CA Alberta Provincial (Canada, 6/2018).**

15 min OEL: 543 mg/m<sup>3</sup> 15 minutes.  
15 min OEL: 125 ppm 15 minutes.  
8 hrs OEL: 434 mg/m<sup>3</sup> 8 hours.  
8 hrs OEL: 100 ppm 8 hours.

**CA British Columbia Provincial (Canada,  
6/2022).**

TWA: 20 ppm 8 hours.

**CA Ontario Provincial (Canada, 6/2019).**

TWA: 20 ppm 8 hours.

**CA Quebec Provincial (Canada, 6/2022).**

TWAEV: 20 ppm 8 hours.

**CA Saskatchewan Provincial (Canada,  
7/2013).**

STEL: 125 ppm 15 minutes.  
TWA: 100 ppm 8 hours.

crystalline silica, respirable powder (>10 microns)

**CA British Columbia Provincial (Canada,  
6/2022). [Silica, Crystalline - alpha quartz  
and Cristobalite Respirable]**

TWA: 0.025 mg/m<sup>3</sup> 8 hours. Form:  
Respirable

**CA Ontario Provincial (Canada, 6/2019).  
[Silica, Crystalline (Quartz/Tripoli)]**

TWA: 0.1 mg/m<sup>3</sup> 8 hours. Form: Respirable  
**CA Quebec Provincial (Canada, 6/2022).**

## Section 8. Exposure controls/personal protection

titanium dioxide

### [Silica Crystalline -Quartz]

TWAEV: 0.1 mg/m<sup>3</sup> 8 hours. Form: Respirable dust.

**CA Alberta Provincial (Canada, 6/2018).**

8 hrs OEL: 0.025 mg/m<sup>3</sup> 8 hours. Form: Respirable particulate

**CA Saskatchewan Provincial (Canada, 7/2013).**

TWA: 0.05 mg/m<sup>3</sup> 8 hours. Form: respirable fraction

**CA British Columbia Provincial (Canada, 6/2022). [Titanium dioxide]**

TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Total dust  
TWA: 3 mg/m<sup>3</sup> 8 hours. Form: respirable fraction

**CA Quebec Provincial (Canada, 6/2022).**

TWAEV: 10 mg/m<sup>3</sup> 8 hours. Form: Total dust.

**CA Alberta Provincial (Canada, 6/2018). Skin sensitizer.**

8 hrs OEL: 10 mg/m<sup>3</sup> 8 hours.

**CA Ontario Provincial (Canada, 6/2019).**

TWA: 10 mg/m<sup>3</sup> 8 hours. Form: total dust

**CA Saskatchewan Provincial (Canada, 7/2013).**

STEL: 20 mg/m<sup>3</sup> 15 minutes.

TWA: 10 mg/m<sup>3</sup> 8 hours.

**CA Alberta Provincial (Canada, 6/2018). Absorbed through skin.**

8 hrs OEL: 188 mg/m<sup>3</sup> 8 hours.

8 hrs OEL: 50 ppm 8 hours.

**CA British Columbia Provincial (Canada, 6/2022).**

TWA: 20 ppm 8 hours.

**CA Ontario Provincial (Canada, 6/2019).**

TWA: 20 ppm 8 hours.

**CA Quebec Provincial (Canada, 6/2022).**

TWAEV: 20 ppm 8 hours.

**CA Saskatchewan Provincial (Canada, 7/2013). Absorbed through skin.**

STEL: 60 ppm 15 minutes.

TWA: 50 ppm 8 hours.

toluene

Consult local authorities for acceptable exposure limits.

**Recommended monitoring procedures** : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

## Section 8. Exposure controls/personal protection

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Chemical splash goggles.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Gloves** : butyl rubber

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : 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. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

## Section 9. Physical and chemical properties

### Appearance

**Physical state** : Liquid.  
**Color** : Not available.  
**Odor** : Characteristic.  
**Odor threshold** : Not available.  
**pH** : Not applicable.  
**Melting point** : Not available.  
**Boiling point** : >37.78°C (>100°F)  
**Flash point** : Closed cup: 36.67°C (98°F)  
**Auto-ignition temperature** : Not available.  
**Decomposition temperature** : Not available.  
**Flammability** : Not available.

## Section 9. Physical and chemical properties

**Lower and upper explosive (flammable) limits** : Not available.

**Evaporation rate** : 0.77 (butyl acetate = 1)

**Vapor pressure** : 1.3 kPa (9.6 mm Hg)

**Vapor density** : Not available.

**Relative density** : 1.45

**Density ( lbs / gal )** : 12.1

Media	Result
cold water	Not soluble

**Partition coefficient: n-octanol/water** : Not applicable.

**Viscosity** : Kinematic (40°C (104°F)): >21 mm<sup>2</sup>/s (>21 cSt)

**Volatility** : 22% (v/v), 13.461% (w/w)

**% Solid. (w/w)** : 86.539

## Section 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : When exposed to high temperatures may produce hazardous decomposition products.  
Refer to protective measures listed in sections 7 and 8.

**Incompatible materials** : Keep away from the following materials to prevent strong exothermic reactions: oxidizing agents, strong alkalis, strong acids.

**Hazardous decomposition products** : Depending on conditions, decomposition products may include the following materials: carbon oxides halogenated compounds metal oxide/oxides

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Bis-[4-(2,3-epoxipropoxy)phenyl]propane	LD50 Dermal	Rabbit	23000 mg/kg	-
	LD50 Oral	Rat	15000 mg/kg	-
diiron trioxide	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Oral	Rat	10 g/kg	-
1-methoxy-2-propanol	LC50 Inhalation Vapor	Rat	>7000 ppm	6 hours
	LD50 Dermal	Rabbit	13 g/kg	-
n-butyl acetate	LD50 Oral	Rat	5.2 g/kg	-
	LC50 Inhalation Vapor	Rat	>21.1 mg/l	4 hours

## Section 11. Toxicological information

oxirane, mono[(C12-14-alkyloxy)methyl] derivs. xylene	LC50 Inhalation Vapor	Rat	2000 ppm	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10.768 g/kg	-
	LD50 Oral	Rat	17100 mg/kg	-
ethylbenzene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
	LC50 Inhalation Vapor	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
titanium dioxide	LD50 Oral	Rat	3.5 g/kg	-
	LC50 Inhalation Dusts and mists	Rat	>6.82 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LD50 Oral	Rat	5580 mg/kg	-

**Conclusion/Summary** : There are no data available on the mixture itself.

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Eyes - Mild irritant	Rabbit	-	24 hours	-
	Eyes - Redness of the conjunctivae	Rabbit	0.4	24 hours	-
	Skin - Edema	Rabbit	0.5	4 hours	-
	Skin - Erythema/Eschar	Rabbit	0.8	4 hours	-
	Skin - Mild irritant	Rabbit	-	4 hours	-
xylene	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-

**Conclusion/Summary**

**Skin** : There are no data available on the mixture itself.

**Eyes** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

**Sensitization**

Product/ingredient name	Route of exposure	Species	Result
bis-[4-(2,3-epoxipropoxy)phenyl]propane oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	skin	Mouse	Sensitizing
	skin	Guinea pig	Sensitizing

**Skin** : There are no data available on the mixture itself.

**Respiratory** : There are no data available on the mixture itself.

**Mutagenicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Carcinogenicity**

**Conclusion/Summary** : There are no data available on the mixture itself.

**Classification**

## Section 11. Toxicological information

Product/ingredient name	OSHA	IARC	NTP
is-[4-(2,3-epoxipropoxy)phenyl] propane	-	3	-
crystalline silica, respirable powder (<10 microns)	-	1	Known to be a human carcinogen.
diiron trioxide	-	3	-
xylene	-	3	-
ethylbenzene	-	2B	-
crystalline silica, respirable powder (>10 microns)	-	1	Known to be a human carcinogen.
titanium dioxide	-	2B	-
toluene	-	3	-

### Carcinogen Classification code:

IARC: 1, 2A, 2B, 3, 4

NTP: Known to be a human carcinogen; Reasonably anticipated to be a human carcinogen

OSHA: +

Not listed/not regulated: -

### Reproductive toxicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Teratogenicity

**Conclusion/Summary** : There are no data available on the mixture itself.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
1-methoxy-2-propanol	Category 3	-	Narcotic effects
n-butyl acetate	Category 3	-	Narcotic effects
xylene	Category 3	-	Respiratory tract irritation
toluene	Category 3	-	Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
crystalline silica, respirable powder (<10 microns)	Category 1	inhalation	-
ethylbenzene	Category 2	-	hearing organs
toluene	Category 2	-	-

**Target organs** :  Contains material which causes damage to the following organs: liver, spleen, brain, bone marrow.  
 Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, heart, upper respiratory tract, immune system, skin, central nervous system (CNS), ears, eye, lens or cornea.

### Aspiration hazard

Name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1

### Information on the likely routes of exposure

## Section 11. Toxicological information

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

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

- Conclusion/Summary** : There are no data available on the mixture itself. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. This product contains TiO<sub>2</sub> which has been classified as a GHS Carcinogen Category 2 based on its IARC 2B classification. For many products, TiO<sub>2</sub> is utilized as a raw material in a liquid coating formulation. In this case, the TiO<sub>2</sub> particles are bound in a matrix with no meaningful potential for human exposure to unbound particles of TiO<sub>2</sub> when the product is applied with a brush or roller. Sanding the coating surface or mist from spray applications may be harmful depending on the duration and level of exposure and require the use of appropriate personal protective equipment and/or engineering controls (see Section 8). Exposure to component solvent vapor concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Solvents may cause some of the above effects by absorption through the skin. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. If splashed in the eyes, the liquid may cause irritation and reversible damage. Ingestion may cause nausea, diarrhea and vomiting. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.



## Section 11. Toxicological information

### Short term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Long term exposure

**Potential immediate effects** : There are no data available on the mixture itself.

**Potential delayed effects** : There are no data available on the mixture itself.

### Potential chronic health effects

**General** : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : Suspected of damaging fertility or the unborn child.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
KEELock HI-SOLIDS EPOXY 9394	65057.8	30427.2	N/A	67.8	8.3
bis-[4-(2,3-epoxipropoxy)phenyl]propane	15000	23000	N/A	N/A	N/A
diiron trioxide	10000	N/A	N/A	N/A	N/A
1-methoxy-2-propanol	5200	13000	N/A	N/A	N/A
n-butyl acetate	10768	N/A	N/A	N/A	N/A
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	17100	N/A	N/A	N/A	N/A
xylene	4300	1700	N/A	11	1.5
ethylbenzene	3500	17800	N/A	17.8	1.5
toluene	5580	8390	N/A	49	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
bis-[4-(2,3-epoxipropoxy)phenyl]propane	Acute LC50 1.8 mg/l Fresh water	Daphnia - <i>daphnia magna</i>	48 hours
	Chronic NOEC 0.3 mg/l	Daphnia	21 days
diiron trioxide	Acute EC50 >100 mg/l	Daphnia	48 hours
1-methoxy-2-propanol	Acute LC50 23300 mg/l	Daphnia	48 hours
	Acute LC50 >4500 mg/l Fresh water	Fish	96 hours
n-butyl acetate	Acute LC50 18 mg/l	Fish	96 hours
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	LC50 >100 mg/l	Fish	96 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	-

## Section 12. Ecological information

titanium dioxide	Acute LC50 >100 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
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### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
n-butyl acetate	TEPA and OECD 301D	83 % - Readily - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
bis-[4-(2,3-epoxipropoxy)phenyl]propane	-	-	Not readily
n-butyl acetate	-	-	Readily
xylene	-	-	Readily
ethylbenzene	-	-	Readily
toluene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
n-methoxy-2-propanol	<1	-	Low
n-butyl acetate	2.3	-	Low
oxirane, mono[(C12-14-alkyloxy)methyl] derivs.	3.77	-	Low
xylene	3.12	7.4 to 18.5	Low
ethylbenzene	3.6	79.43	Low
toluene	2.73	8.32	Low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## Section 13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

## Section 14. Transport information

	<b>TDG</b>	<b>IMDG</b>	<b>IATA</b>
<b>UN number</b>	UN1263	UN1263	UN1263
<b>UN proper shipping name</b>	PAINT	PAINT	PAINT
<b>Transport hazard class (es)</b>	3	3	3
<b>Packing group</b>	III	III	III
<b>Environmental hazards</b>	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
<b>Marine pollutant substances</b>	(bis-[4-(2,3-epoxipropoxy)phenyl]propane)	(bis-[4-(2,3-epoxipropoxy)phenyl]propane)	Not applicable.

### Additional information

- TDG** : The marine pollutant mark is not required when transported by road or rail.  
**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.  
**IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.

**Special precautions for user** : **Transport within user's premises**: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not applicable.

**Proof of classification statement** : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.7 (Marine pollutant mark).

## Section 15. Regulatory information

### National Inventory List

Canada inventory ( DSL ) : All components are listed or exempted.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

**Health** : 2 \* **Flammability** : 3 **Physical hazards** : 0  
 ( \* ) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on MSDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

## Section 16. Other information

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

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

Health : 2 Flammability : 3 Instability : 0

Date of issue/Date of revision 8 September 2023

Organization that prepared the SDS : EHS

Key to abbreviations : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
SGG = Segregation Group  
UN = United Nations

✔ Indicates information that has changed from previously issued version.

### Disclaimer

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