

Safety Data Sheet
acc. to OSHA HCS

Print Date 05/19/2015

Revision Date 05/19/2015

Product Identifier

Trade Name: EP1200LV A

Application of the Substance or Mixture: Epoxy Resin

Details of the Supplier of the Safety Data Sheet (SDS)

Manufacturer or Supplier:

Resinlab, LLC
N109 W13300 Ellsworth Drive,
Germantown, WI 53022
1-800-388-8605
www.resinlab.com

Information Department: Product Safety Department: msds@resinlab.com

Emergency Telephone Number:

North America - Chemtrec: 1-800-424-9300 (24 hours)
International - Chemtrec: 01-703-527-3887 (24 hours)

2 Hazard(s) identification

Hazard Classification



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.



GHS09 Environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.

Label Elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Pictogram(s)



GHS07



GHS08



GHS09

Signal Word Warning

Hazard-determining Component(s)

Bisphenol-A-(epichlorohydrin) epoxy resin
2,3-Epoxypropyl neodecanoate

Hazard statements

Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.

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Wear eye protection / face protection.
 Avoid release to the environment.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Specific treatment (see on this label).
 Wash contaminated clothing before reuse.
 IF exposed or concerned: Get medical advice/attention.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 If on skin: Wash with plenty of water.
 Collect spillage.
 Take off contaminated clothing and wash it before reuse.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection.
 Use personal protective equipment as required.
 Avoid release to the environment.
 Wash thoroughly after handling.
 Contaminated work clothing must not be allowed out of the workplace.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard Rating System

NFPA System

NFPA Ratings (scale 0 - 4)



NFPA special hazards (water reactivity and oxidizing property): None

HMIS System

HMIS Ratings (scale 0 - 4)



Other hazards

Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical Characterization: Mixtures

Composition/Information on Ingredients

CAS: 14808-60-7 EINECS: 238-878-4 RTECS: VV 7330000	Quartz ⚠ Carc. 2, H351; STOT RE 2, H373	40-50%
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CAS: 25068-38-6 NLP: 500-033-5 Index Number: 603-074-00-8	Bisphenol-A-(epichlorohydrin) epoxy resin ⚠ Aquatic Chronic 2, H411 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	30-40%
CAS: 26761-45-5 EINECS: 247-979-2	2,3-Epoxypropyl neodecanoate ⚠ Muta. 2, H341 ⚠ Skin Sens. 1, H317	10-20%
CAS: 1333-86-4 EINECS: 215-609-9 RTECS: FF5800000	Carbon black (Wetted form) Eye Dam. 2B, H320	0.1-1%

Classification System:

The Classifications were based on the Toxicological and Ecological Data of the substances/mixtures in the Section 11 and 12.

4 First-aid measures

Description of First Aid Measures
General Information

Ensure medical personnel are aware of exposure and take precautions for their personal protection; see Section 8 for the information of personal protection.

After Inhalation

 Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing. Supply fresh air and to be sure call for a doctor.
 In case of unconsciousness place patient stably in side position for transportation.
 Supply fresh air; consult doctor in case of complaints.

After Skin Contact

 Remove all contaminated clothing and wash before reuse.
 Wash contaminated skin with water and soap and rinse thoroughly.
 Seek medical treatment in case of complaints.

After Eye Contact

 Immediately bathe eyes for 15 minutes under running water.
 Immediately remove contact lenses if present. Continue rinsing.
 Seek immediate medical advice.

After Swallowing

 If victim is unconscious; never give anything by mouth.
 If victim is conscious; rinse out mouth and give victim small amounts of water.
 Seek medical treatment in case of complaints.

After Exposure Seek medical treatment in case of complaints.

Information for Doctor Have chemical containers, labels and/or (M)SDS ready when calling or visiting a medical center.

Indication of any Immediate Medical Attention and Special Treatment Needed

After frequent or high intense exposure, the following medical tests are recommended:

eye tests

skin tests

Check section 11 Toxicological Information for further relevant information.

Additional Information

For additional information, please consult the corresponding first aid measures in the most current version of Emergency Response Guidebook which is produced by the US Department of Transportation.

5 Fire-fighting measures

Extinguishing Media
Suitable Extinguishing Agent(s)

 Use fire fighting measures and extinguishing agents that suit the environment.
 In case of fire, suitable extinguishing agents are:
 Alcohol resistant foam.
 Dry chemical or fire-extinguishing powder.

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Carbon dioxide (CO₂).
Water spray or water fog.

Unsuitable Extinguishing Agent(s) Water with full jet

Firefighting Procedures

Isolate fire and deny unnecessary entry.
Immediately withdraw all personnel from the area in case of rising sound from venting safety device.
Eliminate all ignition sources if safe to do so.
Do not extinguish fire unless flow can be stopped.
Fight fire remotely due to the risk of explosion.
Burning liquids may be moved by flushing with water; protect personnel and minimize property damage.
Contain fire water runoff if possible to prevent environmental pollution.
Fight fire from protected location or safe distance.
Contain fire water runoff if possible to prevent environmental pollution.

Special Hazards Arising in Fire

Will not burn unless preheated.
In case of fire, following can be released:
Phenolic compounds
Aldehydes
Carbon dioxide (CO₂) and Carbon monoxide (CO)
Silicon oxide (SiO₂)

Advice for Firefighters

If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).
As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

Additional Information Be Caution! Finely dispersed substance may form explosive mixtures in air.

6 Accidental release measures

Personal Precautions

Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.
Ensure personnel take precautions for their personal protection during clean up; see Section 8 for the specific requirements.

Environmental Precautions

Keep away from sewage system or other water courses; do not penetrate ground/soil.
Inform respective authorities in case of any seepage to the environment.

Cleaning Up Methods

Ensure adequate ventilation.
Eliminate all ignition sources.
Keep unauthorized personnel away.
For large spills:
Shut off source of leak if safe to do so.
Dike and contain.
Remove with vacuum trucks or pump to storage/salvage vessels.
Allow molten product to cool.
Absorb residues with liquid-binding materials.
Avoid confined spaces, such as sewers, because of the possibility of an explosion.
For small spills:
Ventilate and wash area after clean-up is complete.
Store in a sealed containers for disposal.
Do not use solvents unless following safe handling practices and within the recommended exposure guidelines.
Dispose contaminated chemicals as waste according to Section 13.

Additional Information No further relevant information.

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7 Handling and storage

Handling

Precautions for Safe Handling

Obtain special instruction before use; do not handle until all safety precautions have been read and understood.

Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.

Wear respiratory protection when handling.

Keep away from incompatible material(s).

Avoid any release into the environment.

Observe all the personal protection requirements in Section 8.

Information about Protection Against Explosions and Fires

Will not burn unless preheated.

Keep away from heat, sparks, open flame and other ignition sources during handling.

Dust can combine with air to form an explosive mixture.

Storage

Requirements to be Met by Storerooms and Receptacles

Store in a well-ventilated place; provide ventilation for receptacles.

Keep stored in accordance with local, regional, national, and international regulations.

Information about Storage in One Common Storage Facility

Store away from incompatible material(s).

Store away from foodstuffs.

Avoid release to the environment.

Additional Information No further relevant information.

8 Exposure controls/personal protection

Engineering Measures or Controls

Exposure Limit Values that Require Monitoring at the Workplace

14808-60-7 Quartz

PEL	see Quartz listing
REL	Long-term value: 0.05* mg/m ³ *respirable dust; See Pocket Guide App. A
TLV	Long-term value: 0.025* mg/m ³ *as respirable fraction

1333-86-4 Carbon black

PEL	Long-term value: 3.5 mg/m ³
REL	Long-term value: 3.5* mg/m ³ *0.1 in presence of PAHs; See Pocket Guide Apps.A+C
TLV	Long-term value: 3* mg/m ³ *inhalable fraction

1344-28-1 Aluminum oxide

ACGIH	Long-term value: 1 mg/m ³ respirable fraction as Aluminum
OSHA	Long-term value: 15 TWA total dust mg/m ³

67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica

OSHA PEL	Short-term value: 15 mg/m ³
US ACGIH	Short-term value: 10 mg/m ³

71-36-3 1-Butyl alcohol

PEL	Long-term value: 300 mg/m ³ , 100 ppm
REL	Ceiling limit value: 150 mg/m ³ , 50 ppm Skin
TLV	Long-term value: 61 mg/m ³ , 20 ppm

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13463-67-7 Titanium dioxide

PEL	Long-term value: 15* mg/m ³ *total dust
REL	See Pocket Guide App. A
TLV	Long-term value: 10 mg/m ³ withdrawn from NIC

64742-48-9 Naphtha (petroleum), hydrotreated heavy

OSHA	Short-term value: 400 mg/m ³
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140-88-5 ethyl acrylate

PEL	Long-term value: 100 mg/m ³ , 25 ppm Skin
REL	See Pocket Guide App. A
TLV	Short-term value: 61 mg/m ³ , 15 ppm Long-term value: 20 mg/m ³ , 5 ppm

Other Engineering Measures or Controls

Ventilation rates should be matched to conditions.

If applicable, use process enclosure(s), local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Personal Protective

General Protective and Hygienic Measures

Avoid any contact with eye.

Do not eat, drink or smoke during work.

Keep food, drink or feed away from working area.

Contaminated work clothing is not allowed out of workplace.

Avoid any skin contact.

Clean hands and exposed skin thoroughly after work and before breaks.

Personal Protective Equipment (PPE)

Breathing Equipment

Caution! Improper use of respirators is dangerous.

In case of brief exposure or low pollution, use a respiratory filter device.

In case of intensive or longer exposure, use a positive-pressure respiratory protective device that is independent of circulating air.

Suggested respirator type(s):

Full Facepiece APR with high efficiency filters

Self-contained breathing apparatus (SCBA)

Hand Protection



Protective gloves

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.

Suggested glove type(s):

Nitrile Gloves

Butyl Rubber Gloves

Eye Protection



Tightly sealed goggles

Body Protection

Where the potential for over-exposure exists, the following protective work clothing is recommended:

Tyvek® Coveralls

Additional Information

All protective clothing (suits, gloves, footwear, headgear) should be clean, available every day, and put on before work.

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The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

9 Physical and chemical properties

Information on Basic Physical and Chemical Properties

Appearance:

- **Form:** Liquid
- **Color:** Black
- **Odor:** Mild epoxy odor
- **Odor Threshold:** Not determined.

· **PH-Value:** Not determined.

Change in Condition:

- **Melting Point:** Not determined.
- **Boiling Point:** >200 °C (>392 °F)
- **Flash Point:** > 126 °C (> 259 °F) (Estimated)
- **Decomposition Temperature:** Not determined.
- **Flammability:** Not determined.
- **Explosion:** Not determined.
- **Explosion Limits:**
 - **Lower:** Not determined.
 - **Upper:** Not determined.

- **Vapor Pressure:** 38.7 hPa (29 mm Hg)
- **Density at 25 °C (77 °F):** 1.57 g/cm³ (13.102 lbs/gal)
- **Solubility in or Miscibility with**
 - **Water:** Not miscible or difficult to mix.
- **Viscosity:**
 - **Dynamic at 20 °C (68 °F):** 12500 mPas
 - **Kinematic:** Not determined.

· **Additional Information** No further relevant information.

10 Stability and reactivity

- **Physical Hazard(s)** Not a regulated reactive or physical hazard under GHS.
- **Hazardous Reactivity and Chemical Stability** Stable under normal conditions of use, storage and temperatures.
- **Thermal Decomposition and Conditions to be Avoided**
 Keep away from incompatible material(s).
 Thermally decomposes during fire or high heat; keep away from heat, sparks, open flame and other ignition sources.
- **Possibility of Other Hazardous Reaction(s)**
 May react with aliphatic amine, mercaptans and Lewis acids causing exothermic polymerization at ambient temperature.
- **Incompatible Material(s)**
 Acetylene
 Mercaptans
 Oxidizing agents
 Acids
 Bases (Alkalis)
 Aliphatic amines

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- **Hazardous Decomposition Product(s)**
Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.
- **Hazardous Polymerization Product(s)** No relevant information.
- **Additional Information** No further relevant information.

11 Toxicological information

For detailed Toxicological Information please email the Product Safety Department.

Acute Toxicity

Oral

14808-60-7 Quartz

Oral	LD50	> 15000 mg/kg (Human) Reference: IUCLID Dataset (2000). - 500 mg/kg (rat) (Particle size tested was 100-200 µm.) Since 99.5% of the substance's particle size are less than 75 µm, the result above can't be used for the classification. Reference: IUCLID Dataset (2000) and US Silica TDS.
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25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Oral	LD50	11400 mg/kg (rat) 15600 mg/kg (mouse) Reference: NLM Toxnet (2010).
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26761-45-5 2,3-Epoxypropyl neodecanoate

Oral	LD50	>2000 mg/kg (rat) Reference: Vendor SDS 2014
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· **Potential Health Effect(s):** Not a classified acute oral hazard.

Dermal

14808-60-7 Quartz

Dermal	LD50	(-) No data available.
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25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Dermal	LD50	20000 mg/kg (rabbit) (Test guideline not available) > 1270 mg/kg (mouse) > 2000 mg/kg (rat) > 1600 mg/kg (rabbit); however, there was no fixed test result available; classification was not possible without further information. Reference: Royce (M)SDS (2011) and ChemID (2010).
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26761-45-5 2,3-Epoxypropyl neodecanoate

Dermal	LD50	>2000 mg/kg (rat) (> 3800 mg/kg) Reference: Vendor SDS 2014
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· **Potential Health Effect(s):** Not a classified acute dermal hazard.

Inhalative

14808-60-7 Quartz

Inhalative	LC50/4 h	(Human) LCLo = 16 mppcf/8 hours= 7.1E-4 mg/L (as respirable dust) The unit conversion above is based on OSHA 1910.1000 Table Z-3. Fibrosis, Focal (Pneumoconiosis), Cough and Dyspnea were found. Reference: NLM TOXNET (2010). - LCLo (human) = 0.3 mg/m ³ = 3E-4 mg/L Reference: NLM TOXNET (2010). - Due to lack of LC50 data, classification is not possible.
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25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Inhalative	LC50/4 h	(Test species: n/a) (Toxicity not expected based on the acute oral data)
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26761-45-5 2,3-Epoxypropyl neodecanoate

Inhalative	LC50/4 h	>240 mg/l (rat) The 4 hour acute inhalation LC50 in rates was >240mg/m3. No signs of intoxication were observed after exposure.
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Potential Health Effect(s):

Silicosis
 Tuberculosis
 Decreased pulmonary function
 Not a classified acute inhalative hazard.
 No further relevant information; classification is not possible.

Skin Corrosion or Irritation**14808-60-7 Quartz**

Corrosion/Irritation	(-) No data available.
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25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Corrosion/Irritation	irritating (rabbit) Acute skin irritation was mild, through repeated and prolonged exposure may cause severe irritation. The substance was classified as Category 2 by GHS-J. Reference: HSNO CCID (2010) and GHS-J (2006).
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26761-45-5 2,3-Epoxypropyl neodecanoate

Corrosion/Irritation	slightly irrit. (rabbit) (Draize Test; 0.5 ml neat substance; 7day post-exp.) Edema: 0.9 (Max. score not available; Time point: 24 hrs) Erythema: 1.6 (Max. score not available; Time point: 24 hrs); the substance was considered as slightly irritating (Category 3) to rabbit skin. Reference: IUCLID Dataset (2000) and ACToR (2011).
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Potential Health Effect(s):

Causes skin irritation.
 In contact with skin, may cause:
 redness and pain

Eye Serious Damage or Irritation**14808-60-7 Quartz**

Damage/Irritation	serious damage (rabbit) Finely divided substance injected into the vitreous body of rabbit eyes caused necrosis of the retina. Reference: IUCLID Dataset (2000).
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25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Damage/Irritation	irritating (rabbit) The substance caused eye irritation (Category 2A) based on the dermal effect to rabbit skin.
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26761-45-5 2,3-Epoxypropyl neodecanoate

Damage/Irritation	not irritating (rabbit) (Directive 84/449/EEC B5) Conjunctival redness: 0.6 (Max. 110; Mean score of all treated animals; 1-2 hour exposure); the test substance was considered as non-irritating to rabbit eyes based on the criteria. Reference: IUCLID Dataset (2000) and ACToR (2011).
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Potential Health Effect(s):

Causes serious eye irritation.
 In contact with eye, may cause:
 redness and pain

Respiratory or Skin Sensitization**14808-60-7 Quartz**

Sensitization	Skin	(-) No data available.
	Respiratory	(-) No data available.

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Sensitization	Skin	sensitizing (Human) Based on positive results from skin sensitization tests on human volunteers and guinea pigs, GHS-J classified the substance as a dermal sensitizer. Reference: GHS-J (2006).
	Respiratory	(No data available)

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26761-45-5 2,3-Epoxypropyl neodecanoate

Sensitization	Skin	sensitizing (guinea pig) (Directive 84/449/EEC B6) The substance caused erythema ranging from very slight to severe along with edema ranging from very slight to slight after application to the treated pigs; the test substance was therefore classified as a skin sensitizer (Category 1) based on the criteria. Reference: IUCLID Dataset (2000) and ACToR (2011).
	Respiratory	(No data available)

Potential Health Effect(s):

May cause an allergic skin reaction.

No relevant information for respiratory sensitization; classification is not possible.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

Germ Cell Mutagenicity
14808-60-7 Quartz

Mutagenicity	negative (salmonella typhimurium) In Vitro (Salmonella typhimurium reverse mutation assay) - negative with and without metabolic activation. Reference: IUCLID Dataset (2000). - negative (Hamster) In Vitro (Chinese hamster V79-4 Cell) - negative In Vitro (Chinese hamster Embryo Cell) - negative In Vitro (Human-hamster hybrid AL cells) - positive without metabolic activation - In Vivo (sister chromatid exchange assay of Syrian hamster) - negative, 3 out of 5 did not induce chromosomal aberration or aneuploidy. In Vivo (sister chromatid exchange assay of Chinese hamster) - negative Reference: IUCLID Dataset (2000) and CCRIS (2010). - negative (Bacillus subtilis) In Vitro (Bacillus subtilis recombination assay) - negative. Reference: IUCLID Dataset (2000).

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Mutagenicity	positive (Chinese hamster lung fibroblast cells) (In Vitro (Chromosomal Aberration)) In Vitro (Chromosomal Aberration; Chinese hamster lung fibroblast cells) - Positive without metabolic activation; negative with metabolic activation. Positive (salmonella typhimurium) (In Vitro (Ames assay)). Due to the absence from In Vivo tests, it was not possible to make a conclusion of mutagenicity of the substance. Reference: NLM CCRIS (2010).
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26761-45-5 2,3-Epoxypropyl neodecanoate

Mutagenicity	suspected (Test species listed below) Positive results were seen in in-vitro Ames test in strains TA100 and TA1535. Negative results were seen in mammalian chromosome aberration and yeast cytogenic assay in-vitro genotox. In Vitro (Bacterial reverse mutation assay; OECD TG 471; S. typhimurium TA97, TA98, or TA1537) - Negative with and without metabolic activation. In Vitro (Bacterial reverse mutation assay; OECD TG 471; S. typhimurium TA100 and TA1535) - Positive with metabolic activation; negative without metabolic activation. In Vitro (Mammalian chromosome aberration test; OECD TG 473; Rat liver (RL1) monolayer slide cultures) - Positive without metabolic activation In Vitro (Yeast cytogenic assay; Saccharomyces cerevisiae) - Negative with and without metabolic activation. In Vivo (Rat; Oral with 5 ml/kg) - there was no effect on liver DNA of the test animals observed. Only negative results were observed from In Vivo tests, the substance was therefore not classified as a mutagen. Reference: IUCLID Dataset (2000).
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Potential Health Effect(s): Suspected of causing genetic defects.

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Carcinogenicity

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Carcinogenicity positive (Test species: n/a)
ACGIH - A2; Suspected Human Carcinogen (inhalable dust form only).
NTP RoC (11th, 2005) - Known Carcinogen (inhalable dust form only).
IARC68 (1997) - Group 1, Carcinogenic to humans (inhalable dust form only).
The substance is classified as Category 1A by GHS-J.
Reference: GHS-J (2007).
The substance is inextricably bound within a product and will not contribute to an inhalation hazard.

negative (Hamster)
Oral - weekly instillation up to 6 mg substance for 15 weeks, no tumor was observed in any group.
Reference: IUCLID Dataset (2000).
The substance is inextricably bound within a product and will not contribute to an inhalation hazard.

positive (rat)
Intraperitoneal and Intrapleural: positive.
Reference: CCRIS (2010).

-
Inhalation: positive with 0.001 mg/L, 6 hrs/day, 5 days/week for 6 weeks.
Reference: IUCLID Dataset (2000).
The substance is inextricably bound within a product and will not contribute to an inhalation hazard.

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Carcinogenicity negative (Test species: n/a) (Not listed by ACGIH, IARC, NTP, or OSHA)
(Mouse)
1 out of 4 cases with female mice showed positive carcinogenic results after a repeated dermal application with 10% concentration of the substance for two years. When considering all of the evidence, the substance was not classified as a carcinogen.
Reference: Dow (M)SDS (2010).

26761-45-5 2,3-Epoxypropyl neodecanoate

Carcinogenicity negative (Test species: n/a)
Not listed as a carcinogen according to ACGIH, IARC, NTP, or OSHA.

Potential Health Effect(s): Not a known Carcinogen.

Reproductive Toxicity

14808-60-7 Quartz

Reproductive Toxi. (-)
No data available.

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Reproductive Toxi. negative (Test species: n/a) (no reproductive or developmental effect observed)
There was no reproductive or developmental effect observed at dosing levels that were toxic to parental animals.
Reference: GHS-J (2006).

26761-45-5 2,3-Epoxypropyl neodecanoate

Reproductive Toxi. (No data available)

Potential Health Effect(s): Not a known Reproductive hazard.

Specific Target Organ Toxicity - Single Exposure

14808-60-7 Quartz

STOT-Single (Human)
Route: Inhalation
Target organs: Respiratory system
Fibrosis, focal (pneumoconiosis), cough and dyspnea were found.
Reference: NLM TOXNET (2010).

-
(rat)
Route: Intratracheal with 200 mg/kg
Target organs: Respiratory system
Fibrosis, focal (pneumoconiosis) were found.
Reference: NLM TOXNET (2010).

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The substance is classified as Category 1 (respiratory system) via inhalation upon single exposure.

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25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

STOT-Single Target: None (Rats and Mice) (No effect after single oral doses)
 Somnolence (general depressed activity) and dyspnea were observed after a single oral application with 11400 mg/kg to rats, or 15600 mg/kg to mice of the substance. However, the dose levels were both outside of the guidance value ranges.
 Reference: NLM Toxnet (2010).

26761-45-5 2,3-Epoxypropyl neodecanoate

STOT-Single (No data available)

Potential Health Effect(s): Not a known hazard to organs upon single exposure.

Specific Target Organ Toxicity - Repeated Exposure**14808-60-7 Quartz**

STOT-Repeated (Human)
 Route: Inhalation
 Target organs: Respiratory system and kidney
 The substance was classified as Category 1 based on the respiratory and kidney effects of humans.
 Reference: GHS-J (2006).

(rat)
 Inhalation for 420 days (40% particle size < 0.5 µm)
 Target organs: Lung
 By 220 days: silicotic nodules, showing only reticulin fibrosis had developed.
 By 300 days: dense, rounded collagenous nodules were present.
 Reference: IUCLID Dataset (2000).

The substance is classified as Category 1 (respiratory system and kidney) via inhalation upon repeated exposure.

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

STOT-Repeated Target: N/A (guinea pig) (insufficient data for classification)
 With dermal application of the substance for 55 days, increased seromuroid concentrations, decreased lactate-dehydrogenase (LDH), and decreased leucyl-naphthylamidase (LNA) were observed in the test animals. Meanwhile, the substance caused a toxic effect on blood components of female guinea-pigs with greater effects on pregnant animals. However, there was no detail available regarding the dose level or test guideline, classification was thus not possible.
 Reference: HSNO CCID (2010).

26761-45-5 2,3-Epoxypropyl neodecanoate

STOT-Repeated (rat)
 Target Organs: None
 LOAEL (Oral; 5 weeks; OECD TG 407) = 5000 ppm (approx. 478 mg/kg); outside of the guidance value ranges.
 Reference: ACToR (2011).

Potential Health Effect(s): No further relevant information; classification is not possible.

Aspiration Hazard**14808-60-7 Quartz**

Aspiration Hazard (-)
 No data available.

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Aspiration Hazard (No data available)

26761-45-5 2,3-Epoxypropyl neodecanoate

Aspiration Hazard (No data available)

Potential Health Effect(s): No relevant information; classification is not possible.

Additional Information No further relevant information.

12 Ecological information

Aquatic Environmental Toxicity**14808-60-7 Quartz**

Algae Toxicity (-)
 No data available.

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Crustacean Toxicity	(-) No data available.
Fish Toxicity	(-) No data available.

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Algae Toxicity	(No data available)
Crustacean Toxicity	1.4 - 1.7 mg/l (Daphnia magna (water flea)) (EC50 (48 hrs))
Fish Toxicity	1.41 mg/l (Oryzias latipes (Rice fish)) (LC50 (96 hrs)) 3.1 mg/l (Pimephales promelas (fathead minnow)) (LC50 (96 hrs)) Based on the non-rapid degradability and the acute LC50 < 10 mg/L, the substance is classified as a Chronic-2 environmental hazard. Reference: Dow (M)SDS (2010) and CHRIP (2010).

26761-45-5 2,3-Epoxypropyl neodecanoate

Algae Toxicity	3.5 mg/l (Selenastrum capricornum) (EC50 (96 hrs), OECD TG 201)
Crustacean Toxicity	4.8 mg/l (Daphnia magna (water flea)) (EC50 (48 hrs), OECD TG 202)
Fish Toxicity	5 mg/l (Oncorhynchus mykiss (Rainbow trout)) (LC50 (96 hrs), OECD TG 203) Based on the non-rapid degradability and the acute LC50 < 10 mg/L, the substance is classified as a Chronic-2 environmental hazard. Reference: IUCLID Dataset (2000) and ECHA (2012).

Aquatic Environmental Toxicity Assessment: Toxic to aquatic life with long lasting effects.

Degradability and Stability

14808-60-7 Quartz

Biodegradation	(-) Not applicable.
Persistence	persistent (-) The substance is persistent. Reference: Canada DSL (2007).
Photodegradation	(-) Not applicable.
Stability in water	(-) Insoluble, hence not applicable. Reference: IUCLID Dataset (2000).

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

Biodegradation	non-biodegrad. (Test species: n/a) (Biodegradation (OECD TG 302B; 28 days) = 12%) (Activated Sludge) (OECD TG 301C; 4 weeks; Conc. 100 mg/L) Biodegradation (Indirect Analysis from BOD) = 0% Biodegradation (Direct Analysis from HPLC) = 0% The substance is non-biodegradable. Reference: Dow (M)SDS (2010) and CHRIP (2010).
Persistence	(Test species: n/a) (This substance is persistent) Reference: Canada DSL (2007) and CHRIP (2010).
Photodegradation	6.69E-11 cm ³ /molecule-sec (OH radical) (Half-life (T1/2) = 1.92 hrs) However, photolysis in water is negligible. Reference: Dow (M)SDS (2010).
Stability in water	(No data available)

26761-45-5 2,3-Epoxypropyl neodecanoate

Biodegradation	not readily (Activated Sludge) (OECD TG 301D and 302A) Degradation (OECD TG 301D) = 7 - 8 % Degradation (OECD TG 302A) = 68% The substance is not readily biodegradable but inherently biodegradable. Reference: IUCLID Dataset (2000).
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Persistence	(Test species: n/a) The substance is not persistent. Reference: Canada DSL (2007).
Photodegradation	9.44E-12 cm ³ /molecule-sec (OH radical) Half-life (1.0E6 OH/cm ³) = 0.9 day Reference: IUCLID Dataset (2000).
Stability in water	(No data available)

Bioaccumulation and Distribution

14808-60-7 Quartz

BCF	(-) No data available.
Koc	(-) The substance is the major component of the soil (55.2%); thus, the mobility of soil is low. Reference: IUCLID Dataset (2000).
LogPow	(-) The LogPow test is not applicable. The substance is not bioaccumulative. Reference: IUCLID Dataset (2000) and Canada DSL (2007).

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

BCF	0.56-42 (Cyprinus carpio) (The substance is low-bioaccumulative) BCF (28 days; Concentration: 10 µg/L) = 0.56 - 0.67, 3.3 - 4.2 BCF (28 days; Concentration: 1 µg/L) = 5.6 - 6.8, 33 - 42 Reference: CHRIP (2010).
Koc	1800 - 4400 L/kg (soil) Potential for mobility in soil is moderate. Reference: Dow (M)SDS (2010).
LogPow	3.7 - 3.9 (Test species: n/a) Reference: Dow (M)SDS (2010).

26761-45-5 2,3-Epoxypropyl neodecanoate

BCF	2.2 - 3.1 (Test species: n/a) (LogBCF; Predicted by BCFWIN and OASIS) The substance is not bioaccumulative. Reference: Canada DSL CCR (2011).
Koc	(No data available) The substance would partition primarily to water (75.7%) and to a lesser extent air (24.0%) based on Level 1 Mackey Modeling. Reference: IUCLID Dataset (2000).
LogPow	4.4 (Test species: n/a) (OEC TG 117; 20 °C) Reference: IUCLID Dataset (2000).

Degradability and Bioaccumulation Assessment: Non-rapidly degradable, and low bioaccumulative.

Additional Information No further relevant information.

13 Disposal considerations

Hazardous Waste List

Description: It may be necessary to contain and dispose of the substance/mixture as a hazardous waste.

RCRA Waste:

71-36-3	1-Butyl alcohol	U031 (n-Butyl alcohol (I))	0-<0.1%
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Waste Treatment Recommendation:

Generation of waste should be avoided or minimized wherever possible.

Chemical waste, even small quantities, is neither allowed to be poured down drains, sewage system or waterways; nor disposed with household garbage.

Dispose of contents/containers in accordance with local, regional, national, and international regulations.

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Unused and Uncontaminated Packagings
Recommendation Dispose of according to your local waste regulations.

14 Transport information

UN-Number

DOT, ADR, IMDG, IATA UN3082

UN Proper Shipping Name

DOT, ADR, IMDG, IATA Environmentally hazardous substances, liquid, n.o.s. (Bisphenol-A-(epichlorohydrin) epoxy resin, 2,3-Epoxypropyl neodecanoate)

Transport hazard class(es)

DOT, IMDG, IATA


 Class 9 Miscellaneous dangerous substances and articles
 Label 9

ADR

 Class 9 (M6) Miscellaneous dangerous substances and articles
 Label 9

Packing group

DOT, ADR, IMDG, IATA III

Environmental Hazards:
Marine Pollutant: Yes
 Symbol (fish and tree)

Special Marking (ADR): Symbol (fish and tree)

Special Marking (IATA): Symbol (fish and tree)

Special Precautions:

 Warning: Miscellaneous dangerous substances and articles
 Danger Code (Kemler): 90
 EMS Number: F-A, N/A

Transport in Bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional Information:
DOT
Quantity limitations On passenger aircraft/rail: No limit
 On cargo aircraft only: No limit

Remarks: Special marking with the symbol (fish and tree).

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ADR**Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

IMDG**Limited quantities (LQ)**

5L

Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation":

UN3082, Environmentally hazardous substances, liquid, n.o.s. (Bisphenol-A-(epichlorohydrin) epoxy resin, 2,3-Epoxypropyl neodecanoate), 9, III

15 Regulatory information

USA Regulation Lists**SARA (Superfund Amendments and Reauthorization Act of 1986)****Section 302 (Extremely Hazardous Substances)**

None of the ingredients is listed.

Section 313 (Toxics Release Inventory (TRI) reporting)

71-36-3	1-Butyl alcohol	0-<0.1%
140-88-5	ethyl acrylate	0-<0.1%

Section 311/312 (Hazardous Chemical Inventory Reporting)

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin	A, C	30-40%
26761-45-5	2,3-Epoxypropyl neodecanoate	A, C	10-20%
1333-86-4	Carbon black	A, C	0.1-<1%

Hazard Abbreviations for SARA 311/312

A - Acute Health Hazard

C - Chronic Health Hazard

F - Fire Hazard

R - Reactive Hazard

S - Sudden Release of Pressure Hazard

TSCA (Toxic Substances Control Act)

All ingredients are listed.

Proposition 65**Chemicals Known to Cause Cancer**

14808-60-7	Quartz
1333-86-4	Carbon black
13463-67-7	Titanium dioxide
140-88-5	ethyl acrylate
106-89-8	1-chloro-2,3-epoxypropane

Chemicals Known to Cause Reproductive Toxicity for Females

None of the ingredients is listed.

Chemicals Known to Cause Reproductive Toxicity for Males

106-89-8	1-chloro-2,3-epoxypropane
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Chemicals Known to Cause Developmental Toxicity

None of the ingredients is listed.

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Carcinogenic Categories

EPA (Environmental Protection Agency)

71-36-3	1-Butyl alcohol	D
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IARC (International Agency for Research on Cancer)

14808-60-7	Quartz	1
1309-37-1	diiron trioxide	3
13463-67-7	Titanium dioxide	2B
103-11-7	2-ethylhexyl acrylate	3
140-88-5	ethyl acrylate	2B

NTP (National Toxicology Program)

14808-60-7	Quartz	K
140-88-5	ethyl acrylate	R

TLV (Threshold Limit Value Established by ACGIH)

14808-60-7	Quartz	A2
1333-86-4	Carbon black	A4
1309-37-1	diiron trioxide	A4
13463-67-7	Titanium dioxide	A4
140-88-5	ethyl acrylate	A4

NIOSH-Ca (National Institute for Occupational Safety and Health)

14808-60-7	Quartz	
13463-67-7	Titanium dioxide	
140-88-5	ethyl acrylate	

International Regulation Lists

Canadian Domestic Substance Listings:

All ingredients are listed.

Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

Canadian Ingredient Disclosure list (limit 1%)

14808-60-7	Quartz
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Chinese Chemical Inventory of Existing Chemical Substances:

All ingredients are listed.

Japanese Existing and New Chemical Substance List:

14808-60-7	Quartz
25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
26761-45-5	2,3-Epoxypropyl neodecanoate
1333-86-4	Carbon black
1344-28-1	Aluminum oxide
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
71-36-3	1-Butyl alcohol
1309-37-1	diiron trioxide
13463-67-7	Titanium dioxide
103-11-7	2-ethylhexyl acrylate
140-88-5	ethyl acrylate
7732-18-5	Water, distilled

Korean Existing Chemical Inventory:

14808-60-7	Quartz
25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
26761-45-5	2,3-Epoxypropyl neodecanoate

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1333-86-4	Carbon black
1344-28-1	Aluminum oxide
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
71-36-3	1-Butyl alcohol
1309-37-1	diiron trioxide
13463-67-7	Titanium dioxide
64742-48-9	Naphtha (petroleum), hydrotreated heavy
103-11-7	2-ethylhexyl acrylate
140-88-5	ethyl acrylate
7732-18-5	Water, distilled

European Pre-registered substances:

All ingredients are listed.

REACH - Substances of Very High Concern (SVHC) List:

None of the ingredients is listed.

Restriction of Hazardous Substances Directive (RoHS) list:

None of the ingredients is listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department Issuing (M)SDS: Product Safety Department

Contact: msds@resinlab.com

Abbreviations and acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists

ACToR: US EPA Aggregated Computational Toxicology Resource

ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road

BCF: Bioconcentration Factor

CAS: Chemical Abstracts Service (division of the American Chemical Society)

CCRIS: US NLM TOXNET Chemical Carcinogenesis Research Information System

CHRIP: Japan NITE Information on Biodegradation and Bioconcentration of the Existing Chemical Substances in the Chemical Risk Information Platform

DOT: US Department of Transportation

DSL: Canada Domestic Substance List

ECHA: European Chemicals Agency's Dissemination portal with information on chemical substances registered under REACH

ESIS: European Chemical Substances Information System

HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System

HSDB: US NLM TOXNET Hazardous Substances Databank

HSNO CCID: New Zealand Hazardous Substances and New Organisms Chemical Classification Information Database

IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)

IATA-DGR: Dangerous Goods Regulations (DGR) by the International Air Transport Association (IATA)

ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)

ICSC: International Chemical Safety Cards

IMDG: International Maritime Dangerous Goods; the principal international rules for International Carriage of Dangerous Goods by SEA under the Recommendations on the Transport of Dangerous Goods by United Nations (RTDG)

IUCLID: EU REACH International Uniform Chemical Information Database

Koc: Partition coefficient, soil Organic Carbon to water

LC50/LD50: Lethal Concentration/Dose, 50 percent

N/a: Not available or Not applicable

NFPA: US National Fire Protection Association

NIOSH: US National Institute of Occupational Safety and Health

NITE: National Institute of Technology and Evaluation, Japan

NLM TOXNET: US National Library of Medicine Toxicology Data Network

OECD: Organisation for Economic Co-operation and Development

OSHA: US Occupational Safety and Health Administration

P: Marine Pollutant

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RCRA: Resource Conservation and Recovery Act (USA)

REACH: EU Registry, Evaluation and Authorisation of Chemicals

RID: the Regulations Concerning the International Carriage of Dangerous Goods by Rail; published by the Central Office for International Carriage by Rail (OTIF)

RTDG: the Recommendations on the Transport of Dangerous Goods by United Nations (UN)

RTECS: US Registry of Toxic Effects of Chemical Substances

SARA: US Superfund Amendments and Reauthorization Act

SIDS: OECD existing chemicals Screening Information Data Sets

SVHC: EU ECHA Substance of Very High Concern

TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions (SCAPA) of US Department of Energy (DOE)

TOXLINE: US NLM bibliographic database search system

TSCA: US Toxic Substance Control Act

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