

Safety Data Sheet
acc. to OSHA HCS

Print Date 03/17/2015

Revision Date 03/17/2015

Product Identifier

Trade Name: EP1026T3 WHITE 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

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Muta. 2 H341 Suspected of causing genetic defects.
Carc. 2 H351 Suspected of causing cancer.

GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 Environment

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



GHS07

Skin Irrit. 2 H315 Causes skin 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)



GHS05 GHS08 GHS09

Signal Word Danger

Hazard-determining Component(s)

Bisphenol-A-(epichlorohydrin) epoxy resin
Butylglycidylether

Hazard statements

Causes skin irritation.
Causes serious eye damage.

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May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Suspected of causing cancer.
Toxic to aquatic life with long lasting effects.

Precautionary statements

Wear respiratory protection.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
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.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
If experiencing respiratory symptoms: Call a poison center/doctor.
Wash contaminated clothing before reuse.
If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
If exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: 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.

Hazard Rating System

NFPA System

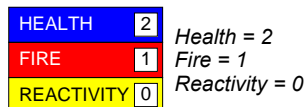
NFPA Ratings (scale 0 - 4)



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.

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3 Composition/information on ingredients

Chemical Characterization: Mixtures

Composition/Information on Ingredients

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	80-90%
CAS: 67762-90-7 EC number: 614-122-2	Siloxanes and Silicones, di-Me, reaction products with silica	5-<10%
CAS: 2426-08-6 EINECS: 219-376-4 Index Number: 603-039-00-7 RTECS: TX 4200000	Butylglycidylether ⚠ Flam. Liq. 3, H226 ⚠ Resp. Sens. 1, H334; Muta. 2, H341; Carc. 2, H351 ⚠ Eye Dam. 1, H318 ⚠ Acute Tox. 4, H302; Acute Tox. 4, H332; STOT SE 3, H335 Aquatic Chronic 3, H412	2.5-5%
CAS: 13463-67-1	Titanium Dioxide Pigment	2.5-5%

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.

If breathing is difficult, administer oxygen.

Seek immediate medical advice.

After Skin Contact

As quickly as possible remove contaminated clothing, shoes, and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Immediately flush with lukewarm water for 15 minutes. Completely decontaminate clothing, shoes, and leather goods before reuse or discard. If irritation persists, obtain medical advice.

After Eye Contact

Immediately rinse opened eyes for at least 15 minutes under running water.

Immediately remove contact lenses if present. Continue rinsing.

Do not put any ointments, oils or medication in eyes without specific instructions.

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.

Immediately call a doctor.

After Exposure Get medical advice/attention at once.

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

respiratory system tests

Check section 11 Toxicological Information for further relevant information.

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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.

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

Formaldehyde, a skin and lung sensitizer and a regulated carcinogen, may be formed during fires.

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 Ensure adequate and functional fire fighting facilities equipped in working area at all times.

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.

Absorb residues with liquid-binding materials.

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For small spills:
Ventilate and wash area after clean-up is complete.
Collect spills in suitable and properly labeled containers.
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.

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.
Avoid any body contact of containers or contents unless wearing appropriate personal protective equipment.
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.

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

2426-08-6 Butylglycidylether	
PEL	Long-term value: 270 mg/m ³ , 50 ppm
REL	Ceiling limit value: 30 mg/m ³ , 5.6 ppm *15-min
TLV	Long-term value: 16 mg/m ³ , 3 ppm Skin; DSEN

Additional Information for the Limit Values

As a SUSPECTED CARCINOGEN, there may be NO safe level of exposure; reduce all contact to the lowest possible level.

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 skin contact.
Do not eat, drink or smoke during work.
Avoid any contact with the eye.
Keep food, drink or feed away from working area.
Contaminated work clothing is not allowed out of workplace.

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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.

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



Brief or short term use: Tightly sealed goggles



Intensive or long term use: Tightly sealed goggles and Face Shields

Body Protection No relevant information.

Additional Information

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

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:** Paste
- Color:** White
- 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:** > 93 °C (> 199 °F)
- Decomposition Temperature:** Not determined.
- Flammability:** Not determined.
- Explosion:** Not determined.
- Explosion Limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.

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- **Vapor Pressure:** Not determined.
- **Density at 20 °C (68 °F):** 1.17 g/cm³ (9.764 lbs/gal)
- **Solubility in or Miscibility with**
 - **Water:** Not miscible or difficult to mix.
- **Viscosity:**
 - **Dynamic:** Not determined.
 - **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** May polymerize when heated.
- **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)** No further relevant information available.
- **Incompatible Material(s)**
 Amines.
 mercaptans
 Oxidizing agents
 Acids
 Bases (Alkalis)
- **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

 · **Acute Toxicity**

· Oral	
25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin	
Oral LD50	11400 mg/kg (rat) 15600 mg/kg (mouse) Reference: NLM Toxnet (2010).
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
Oral LD50	>5000 mg/kg (rat) (test method not specified) Reference: Cabot (M)SDS (2012).
2426-08-6 Butylglycidylether	
Oral LD50	1530 mg/kg (mouse) 1660 mg/kg (rat) Reference: NLM Toxnet (2011).

 · **Potential Health Effect(s):** Not a classified acute oral hazard.

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Dermal

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

Dermal	LD50	(Test species: n/a) (Toxicity not expected based on acute oral data) Based on the acute oral toxicity test, it was expected that toxicity to mammals via dermal application of the substance was not a significant concern and resulted in a similar lack of acute toxicity. Thus, the substance was not classified as an acute dermal hazard as a wetted form.
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2426-08-6 Butylglycidylether

Dermal	LD50	2290 mg/kg (rabbit) (Estimated from LD50 of 2.52mL/kg) > 2150mg/kg (rabbit) Reference: ChemID (2011).
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Potential Health Effect(s): Not a classified acute dermal hazard.

Inhalative

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

Inhalative	LC50/4 h	(Test species: n/a) (Toxicity not expected based on acute oral data) Due to wetted form of the substance, inhalative effects from dust form can be seen as negligible. Meanwhile, based on the acute oral toxicity test, it was expected that toxicity to mammals via inhalation of the substance was not a significant concern and resulted in a similar lack of acute toxicity. Thus, the substance was not classified as an acute inhalation hazard.
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2426-08-6 Butylglycidylether

Inhalative	LC50/4 h	10.96 mg/l (rat) (LC50/4 hrs; calculated from LC50/8 hrs of 1030 ppm) Reference: ChemID and EnviChem (2011).
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Potential Health Effect(s):

wheezing
incoordination
fainting
Not a classified acute inhalative hazard.
cough, headache, sore throat, and passing out

Skin Corrosion or Irritation

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

Corrosion/Irritation	Non-irritating (Test species: n/a) (Primary irritation index=0) mildly irritating (rabbit) (Read across from CAS 63148-62-9) No test detail available; for safety reasons, the substance was classified as mildly irritating (Category 3) to rabbit skin. Reference: HSNO CCID (2010).
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2426-08-6 Butylglycidylether

Corrosion/Irritation	irritating (rabbit) (Draize test) Draize score was 3.3; thus, the substance was classified as a Category 2 skin irritant. irritating (human) Reference: HSNO CCID (2011).
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Potential Health Effect(s):

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

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Eye Serious Damage or Irritation

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.

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

Damage/Irritation slightly irrit. (Human) (Read across from CAS 63148-62-9)
 non-irritating (Primary irritation index=0)
 Transient ocular irritation was observed in humans, rabbits, dogs, and monkeys after injection of the substance to their eye bodies. However, those effects can be seen as negligible based on regular use of the substance. When applying lower viscosity substance-oil mixture to human and rabbit eyes, there was no cornea injury, but a delay of healing of the existed corneal erosion observed. For safety reasons, the substance was classified as a slight eye irritant (Category 2B).
 Reference: ACToR (2011) and Cabot (M)SDS (2012).

2426-08-6 Butylglycidylether

Damage/Irritation mildly irrit. (rabbit)
 The substance caused reversible damage to rabbit eyes when applied as drops.
 Reference: HSDB (2011).

Potential Health Effect(s):

Causes serious eye damage.
 In contact with eye, may cause:
 decrease or loss of vision
 redness, pain and severe deep burns

Respiratory or Skin Sensitization

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)

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

Sensitization	Skin	(No data available) Primary irritation index=0 Non-irritating. Cabot MSDS (2012)
	Respiratory	(No data available)

2426-08-6 Butylglycidylether

Sensitization	Skin	sensitizing (Human) (Patch test) 5 out of 5 human subjects treated with neat substance showed positive reactions; 17 out of 25 human subjects treated with 10% concentrated solution of the substance showed positive reactions. Thus, the substance was classified as a skin sensitizer to humans. Reference: HSDB (2011).
	Respiratory	(No data available)

Potential Health Effect(s):

May cause an allergic skin reaction.
 Repeated skin contact may cause dermatitis, skin rash or itchiness.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

Germ Cell Mutagenicity

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

Mutagenicity negative (Chinese Hamster) (In Vitro (AMES Test))
 negative (Chinese Hamster) (In Vitro (Chromosomal aberration in ovary cells))
 Reference: Cabot (M)SDS (2012).

2426-08-6 Butylglycidylether

Mutagenicity positive (salmonella typhimurium) (In Vitro (Ames test))
 Studies on Butyl Glycidyl Ether showed it to be mutagenic and genotoxic in bacterial and mammalian cell systems. (Germ cell mutagen Group 2) Royce SDS 2014.
 positive (Human) (In Vivo (DNA repair with mononucleated leukocytes))
 negative (mouse) (In Vivo (Dominant lethal&Micronucleus assay))
 REACh CLP, NIOSH ICSC, NJ-RTK, GHS-J, and NLM Toxnet all listed the substance as a suspected mutagen. When considering all of the evidence, the substance was classified as a suspected mutagen for safety reason.
 Reference: NLM CCRIS (2011) and GHS-J (2006).

Potential Health Effect(s): Suspected of causing genetic defects.

Carcinogenicity
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).

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

Carcinogenicity (Test species: n/a) (Not listed by IARC, NTP, OSHA or ACGIH)

2426-08-6 Butylglycidylether

Carcinogenicity (dynamic) N/A (Test species: n/a)
 The substance was listed as a suspected Carcinogen by IARC (Group 2).
 Reference: Royce SDS (2014)
 Substance is listed as Group 2 carcinogen by CLP regulations.

Potential Health Effect(s): Suspected of causing cancer.

Reproductive Toxicity
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).

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

Reproductive Toxi. (No data available)

2426-08-6 Butylglycidylether

Reproductive Toxi. Positive (Test species: n/a) (A known chemical to reproductive males)
 The substance was a listed chemical to male reproductive toxicity by California Proposition 65.
 Suspected of causing genetic defects. Royce SDS 2014.

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

Specific Target Organ Toxicity - Single Exposure
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).

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

STOT-Single (dynamic) (No data available)

2426-08-6 Butylglycidylether

STOT-Single (mouse) (Respiratory tract irritation via Inhalation)
 Target Organs: Respiratory tract irritation (Category 3)
 Inhalation with 260 mg/m³ of the substance caused somnolence, dyspnea, and respiratory depression in mice.
 Reference: NLM Toxnet (2011) and ESIS CLP/GHS.

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

Specific Target Organ Toxicity - 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 seromucoid 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).

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

STOT-Repeated (No data available)

2426-08-6 Butylglycidylether

STOT-Repeated (Test species: n/a) (Insufficient data for classification)
 NOAEL (Inhalation) = 0.52 mg/L/day.
 1. Rats - Decreased body fat, thymic size, and lymphoid organs; abdominal and thoracic viscera; evidence of pneumonia and lethargy; emaciation; liver necrosis; significant increase in kidney/body and lung/body weight ratios; and high incidence of testicular atrophy and bronchopneumonia.
 2. Rabbits - Decreased liver weights; decreased body fat and fecal material in GI tract; exudative rhinitis; and lethargy.
 3. Mice - Decreased liver weights; decreases body fat, thymic size and lymphoid organs; postural and gait changes.
 No test method available; meanwhile, EU or HMIS didn't classify the substance as a chronic hazard. Without further information, classification is not possible.
 Reference: HPVIS (2011) and HSDB (2011).

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

Aspiration Hazard

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

Aspiration Hazard (No data available)

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

Aspiration Hazard (No data available)

2426-08-6 Butylglycidylether

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

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).

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

Algae Toxicity > 10000 mg/l (Scenedesmus subspicatus) (ErC50 (24 hrs), OECD 201)
 Crustacean Toxicity > 1000 mg/l (Daphnia magna (water flea)) (EC50 (24 hrs), OECD 202)
 Fish Toxicity > 10000 mg/l (Brachydanio rerio (Zebra fish)) (LC50 (96 hrs), OECD 203)
 Reference: Cabot (M)SDS (2012).

2426-08-6 Butylglycidylether

Algae Toxicity 35 mg/l (Selenastrum capricornum) (LC50 (96 hrs); OECD TG 201)

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Crustacean Toxicity	3.9 mg/l (Daphnia magna (water flea)) (EC50 (48 hrs); OECD TG 202) Based on the acute EC50 < 10 mg/L and the rapid degradability, the substance is classified as a Chronic-3 environmental hazard. Reference: HPVIS (2011)
Fish Toxicity	(No data available)

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

Degradability and Stability

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)

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

Biodegradation	(No data available)
Persistence	(Test species: n/a) (The substance is not persistent) Reference: Canada DSL (2007).
Photodegradation	(No data available)
Stability in water	(No data available)

2426-08-6 Butylglycidylether

Biodegradation	readily biodeg. (Test species: n/a) (Biodegradation (OECD TG 301C) ≥ 40%) Biodegradation (Direct Analysis from TOC and GC; 28 days) = 56% and 68% Biodegradation (Indirect Analysis from BOD; 28 days) = 40% The substance is readily biodegradable. Reference: CHRIP (2011).
Persistence	(Test species: n/a) (The substance is not persistent) Reference: Canada DSL (2007).
Photodegradation	1.99E-11 cm ³ /molecule-sec (Test species: n/a) Half-life (1.5E6 OH/cm ³ ; calculated by EPIWIN program) = 6.47 hours Reference: NLM Toxnet (2011) and HPVIS (2011).
Stability in water	stable (Test species: n/a) (Half-life (OECD TG 111; PH=7) = 486.7 hours) Thus, the substance is hydrolytically stable in the aquatic environment. Reference: HPVIS (2011).

Bioaccumulation and Distribution

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).

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

BCF	(No data available) (The substance is not bioaccumulative) Reference: Canada DSL CCR (2011).
Koc	(No data available)
LogPow	(No data available)

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2426-08-6 Butylglycidylether

BCF 3.16 (Test species: n/a) (The substance is not bioaccumulative)
 Reference: Canada DSL (2007) and CCR (2011).

Koc (No data available)

LogPow 0.63 (Test species: n/a)
 Reference: NLM Toxnet (2011).

· **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:**

2426-08-6	Butylglycidylether	D001	2.5-5%
71-36-3	1-Butyl alcohol	U031 (n-Butyl alcohol (I))	0.1-<1%

· **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.

· **Unused and Uncontaminated Packagings**

· **Recommendation** Dispose of according to your local waste regulations.

14 Transport information

· **UN-Number**

· **ADR, IMDG, IATA** UN3082

· **UN Proper Shipping Name**

Environmentally hazardous substance, liquid, N.O.S. (Bisphenol-A-(epichlorohydrin)epoxy resin)

· **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**

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· Packing group · DOT, ADR, IMDG, IATA	III
· Environmental Hazards:	Product contains environmentally hazardous substances: Bisphenol-A-(epichlorohydrin) epoxy resin
· 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, S-F
· Transport in Bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional Information:	
· DOT	
· Remarks:	Special marking with the symbol (fish and tree).
· 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), 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	0.1-<1%
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Section 311/312 (Hazardous Chemical Inventory Reporting)

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin	A, C	80-90%
2426-08-6	Butylglycidylether	A, C, F	2.5-5%

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)

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
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67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
2426-08-6	Butylglycidylether
71-36-3	1-Butyl alcohol

Proposition 65
Chemicals Known to Cause Cancer

106-89-8	1-chloro-2,3-epoxypropane
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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.

Carcinogenic Categories
EPA (Environmental Protection Agency)

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

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

TLV (Threshold Limit Value Established by ACGIH)

None of the ingredients is listed.

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

None of the ingredients is listed.

International Regulation Lists
Canadian Domestic Substance Listings:

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
71-36-3	1-Butyl alcohol

Canadian Ingredient Disclosure list (limit 0.1%)

2426-08-6	Butylglycidylether
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Canadian Ingredient Disclosure list (limit 1%)

67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
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Chinese Chemical Inventory of Existing Chemical Substances:

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
2426-08-6	Butylglycidylether
71-36-3	1-Butyl alcohol

Japanese Existing and New Chemical Substance List:

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
2426-08-6	Butylglycidylether
71-36-3	1-Butyl alcohol

Korean Existing Chemical Inventory:

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
2426-08-6	Butylglycidylether

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71-36-3 1-Butyl alcohol

European Pre-registered substances:

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
2426-08-6	Butylglycidylether
71-36-3	1-Butyl alcohol

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
 ESIS: European Chemical Substances Information System
 HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System
 HSDB: US NLM TOXNET Hazardous Substances Databank
 HSNOC: 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)
 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
 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

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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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USA