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· **Product Identifier**
· **Trade Name:** EP11HTFS GRAY 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)

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2 Hazard(s) identification

· **Hazard Classification**

GHS08 Health hazard

Muta. 2	H341 Suspected of causing genetic defects.
Carc. 2	H351 Suspected of causing cancer.

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.
Eye Dam. 2B	H320 Causes eye irritation.

· **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
Butylglycidylether
· **Hazard statements**
Causes skin and eye irritation.
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**
Avoid breathing dust/fume/gas/mist/vapors/spray

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Wear protective gloves.
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.

· **Hazard Rating System**
· **NFPA System**
· **NFPA Ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 0

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

· **HMIS System**
· **HMIS Ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 0

· **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	70-80%

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CAS: 1317-65-3 EINECS: 215-279-6 RTECS: EV 9580000	Calcium Carbonate	10-20%
CAS: 67762-90-7 EC number: 614-122-2	Siloxanes and Silicones, di-Me, reaction products with silica	2.5-5%
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%

· **Classification System:**
The Classifications were based on the Toxicological and Ecological Data of the substances/mixtures in the Section 11 and 12.

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4 First-aid measures

· **Description of First Aid Measures**

· **General Information**
Symptoms may be delayed several hours after exposure; victims should be medically observed for at least 48 hours after exposure.
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.
Give artificial respiration if not breathing.
If breathing is difficult, administer oxygen.
Seek immediate medical advice.

· **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**
Rinse opened eyes under running water for at least 15 minutes.
Remove contact lenses if present and easy to do so; 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**
Move to fresh air at once.
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:
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.

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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 (CO_2).
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.
No information available.
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 (CO_2) and Carbon monoxide (CO)
Calcium oxide (CaO)
Silicon oxide (SiO_2)

· **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.

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

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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.
Ensure good ventilation and/or exhaustion at workplace.
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.

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8 Exposure controls/personal protection

· **Engineering Measures or Controls**

· **Exposure Limit Values that Require Monitoring at the Workplace**

1317-65-3 Calcium Carbonate	
TEEL	Short-term value: 15.0 mg/m³ Long-term value: 60.0 mg/m³ SCAPA, 2008
2426-08-6 Butylglycidylether	
PEL	Long-term value: 270 mg/m³, 50 ppm
REL	Ceiling limit value: 30 mg/m³, 5.6 ppm *15-min
TLV	Long-term value: 16 mg/m³, 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.

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Contaminated work clothing is not allowed out of workplace.
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.
As a classified Carcinogen, there may be NO safe level of exposure; keep respirator on all the time.

· **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**

Safety glasses

· **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.

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9 Physical and chemical properties

· **Information on Basic Physical and Chemical Properties**

· **Appearance:**	
· **Form:**	Paste
· **Color:**	Dark gray
· **Odor:**	Mild epoxy odor
· **Odor Threshold:**	Not determined.
· **PH-Value:**	Not determined.
· **Change in Condition:**	
· **Melting Point:**	Not determined.
· **Boiling Point:**	>116 °C (>241 °F)
· **Flash Point:**	>60 °C (>140 °F) (Estimated)
· **Decomposition Temperature:**	Not determined.
· **Auto-ignition Temperature:**	Not determined.
· **Flammability:**	Not determined.
· **Explosion:**	Not determined.
· **Explosion Limits:**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Vapor Pressure:**	Not determined.
· **Density at 25 °C (77 °F):**	1.26 g/cm³ (10.515 lbs/gal) (ASTM R050-16)

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· **Solubility in or Miscibility with**
· **Water:** Not miscible or difficult to mix.
· **Segregation coefficient LogPow (n-octanol/ water):** Not determined.
· **Henry's Law Constant:** Not determined.
· **Viscosity:**
· **Dynamic at 20 °C (68 °F):** 800000 mPas (ASTM R050-12)
· **Kinematic:** Not determined.

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

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10 Stability and reactivity

· **Physical Hazard(s)**
May self-polymerize exothermically, and/or may attack metals to generate flammable hydrogen, to potentially cause an explosion when heated or involved in a fire; however, classification is not possible due to missing test data.
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)**
May ignite on contact with fluorine.
No further relevant information available.

· **Incompatible Material(s)**
Strong reducing agents
Amines.
Mercaptans
Oxidizing agents
Acids
Bases (Alkalis)
Alum, Fluorine, Ammonium salts, Mercury/hydrogen mixture, and Magnesium

· **Hazardous Decomposition Product(s)**
Irritating fumes
Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.

· **Hazardous Polymerization Product(s)**
May occur, excessive aging, excessive heat. Polymerization catalysts. Oxygen free atmosphere. Inhibitor depletion. Direct sunlight.
Will not occur.

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

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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).

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1317-65-3 Calcium Carbonate		
Oral	LD50	6450 mg/kg (rat) Reference: Imerys (M)SDS (2008).
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):**
While not a classified acute oral hazard, the product may cause the following symptom(s):
See acute inhalative effect(s) for further information

· **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).
1317-65-3 Calcium Carbonate		
Dermal	LD50	(-) No data available.
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.
2426-08-6 Butylglycidylether		
Dermal	LD50	2290 mg/kg (rabbit) (Estimated from LD50 of 2.52mL/kg) > 2150mg/kg (rabbit) Reference: ChemID (2011).

· **Potential Health Effect(s):**
Harmful in contact with skin.
See acute inhalative effect(s) for further information.

· **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)
1317-65-3 Calcium Carbonate		
Inhalative	LC50/4 h	(-) No data available.
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.
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).

· **Potential Health Effect(s):**
Harmful if inhaled.
In inhaled, may cause:

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wheezing
incoordination
fainting
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).
1317-65-3 Calcium Carbonate	
Corrosion/Irritation	moderately (-) The substance is moderately irritating based on the PH = 9.5 with concentration of 50g/L of water at 20C. moderately (rabbit) (Draize test) 500 mg/24h, the pure substance shows no irritating effect, however, the impurities or degradation products may lead to irritant effects on the sweating skin due to alkalinity. Reference: IUCLID dataset of CAS No. 471-34-1 (2000).
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).
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).

· Potential Health Effect(s):
Causes skin irritation.
In contact with skin, may cause:
redness and pain

· 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.
1317-65-3 Calcium Carbonate	
Damage/Irritation	slightly (Human) The substance is slightly irritating to the eyes. Reference: IUCLID Dataset of CAS No. 471-34-1 (2000). not irritating (rabbit) No toxic effect when applied to surface of rabbit eyes Reference: ACToR of CAS No. 471-34-1 (2010).
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).

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· Potential Health Effect(s):
Causes eye irritation.
In contact with eye, may cause:
redness and pain
unlikely to cause corneal injuries

· 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)
1317-65-3 Calcium Carbonate		
Sensitization	Skin	(-) No data available.
	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.
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

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).
1317-65-3 Calcium Carbonate	
Mutagenicity	negative (-) The pure substance is not listed as a carcinogen by NTP, IARC or OSHA. Reference: Imerys (M)SDS (2008).
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).

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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).
1317-65-3 Calcium Carbonate	
Carcinogenicity	negative (salmonella typhimurium) (Preincubation) In Vitro - Negative with and without metabolic activation. Reference: NLM TOXNET of CAS No. 471-34-1 (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) There was no experimental or test data available for carcinogenicity of the substance. Meanwhile, it was not regulated as a carcinogen by OSHA, ACGIH, NTP or IARC. Although the substance was listed as a suspected Carcinogen by IARC (Group 2) & EU; classification was not possible without further information. Reference: Royce SDS (2014), ESIS (2011) and GHS-J (2006).

· **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).
1317-65-3 Calcium Carbonate	
Reproductive Toxi.	(rat) Up to 1.25% diet of the substance for 6 weeks prior to mating and during gestation and found no adverse effects. Reference: ACToR of CAS No. 471-34-1 (2010).
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):** No further relevant information; classification is not possible.

· 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).

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1317-65-3 Calcium Carbonate	
STOT-Single	(Human) Inhalation 0.005 mg/L for 3 hours: target organs - systemic toxicity May affect nasal function and cause nasal symptoms. Ingested up to 15g of the substance: target organs - systemic toxicity Symptoms included: fatigue, anorexia, nausea and vomiting, an elevated blood pressure, hemoconcentration, leukocytosis, metabolic alkalosis, elevated body weight and hypokalemia. Reference: ACToR of CAS No. 471-34-1 (2010). (rat) Exposed to 0.0812 mg/L for 90 minutes/ after 21 hr. No effect on lung weight, macrophage concentration, or histopathology. Reference: ACToR of CAS No. 471-34-1 (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.

· **Potential Health Effect(s):** May cause damage to organs.

· **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 leucylnaphthylamidase (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).
1317-65-3 Calcium Carbonate	
STOT-Repeated	(Human) Target organs - Systemic toxicity Symptoms: Infrequent instances of hypercalcemia with alkalosis, calcinosis, azotemia, renal dysfunction, GI hemorrhage and vomiting or aspiration through nasogastric tube seem to predispose to the disorder. Reference: ACToR of CAS No. 471-34-1.
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):** May cause damage to organs through prolonged or repeated exposure.

· **Aspiration Hazard**

25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin	
Aspiration Hazard	(No data available)

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1317-65-3 Calcium Carbonate	
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.

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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).
1317-65-3 Calcium Carbonate	
Algae Toxicity (static)	56000 mg/l (Gambusia affinis (western mosquitofish)) (LC50 (24 - 96 hrs)) Reference: ACToR of CAS No. 471-34-1 (2010). (Poecilia Latipinna (Sailfin molly)) Exposure period: 96 hrs. NOEC > 200 mg/L Reference: IUCLID Dataset of CAS No. 471-34-1 (2000).
Crustacean Toxicity	(-) The substance is not toxic to aquatic organisms. Reference: Canada DSL of CAS No. 471-34-1 (2007).
Fish Toxicity	(-) The substance is not toxic to aquatic organisms. Reference: Canada DSL of CAS No. 471-34-1 (2007).
Micro-organism toxi	(-) The substance is not toxic to aquatic organisms. Reference: Canada DSL of CAS No. 471-34-1 (2007).
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)
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)

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· **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)

1317-65-3 Calcium Carbonate

Biodegradation	(-) The test is not applicable since this substance is inorganic and not soluble in water. Reference: IUCLID Dataset of CAS No. 471-34-1 (2000).
Photodegradation	positive cm^3/molecule-sec (-) The substance is persistent. Reference: ACToR of CAS No. 471-34-1 (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 hydrotically 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).

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1317-65-3 Calcium Carbonate	
BCF	(-) No data available.
Environment fate	(-) No data available.
Koc	(-) No data available.
LogPow	(-) No data available.

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)

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.

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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-<0.1%

· **Waste Treatment Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
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.

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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)

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· **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

· **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).

· **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

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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%

· **Section 311/312 (Hazardous Chemical Inventory Reporting)**

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin	A, C	70-80%
1317-65-3	Calcium Carbonate	A, C	10-20%
2426-08-6	Butylglycidylether	A, C, F	2.5-5%
1333-86-4	Carbon black (Wetted form)	A, C	0-<0.1%

· **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**

This product may also contain extremely small amounts of one or more naturally occurring materials known to the State of California to cause cancer, birth defects or other reproductive harm.

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

· **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

· **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)**

1333-86-4	Carbon black (Wetted form)	A4

· **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
1317-65-3	Calcium Carbonate

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67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
71-36-3	1-Butyl alcohol
1333-86-4	Carbon black (Wetted form)

· **Canadian Ingredient Disclosure list (limit 0.1%)**

2426-08-6	Butylglycidylether

· **Canadian Ingredient Disclosure list (limit 1%)**

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

· **Chinese Chemical Inventory of Existing Chemical Substances:**

All ingredients are listed.

· **Japanese Existing and New Chemical Substance List:**

All ingredients are listed.

· **Korean Existing Chemical Inventory:**

All ingredients are listed.

· **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.

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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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
CCR: Canadian Categorization Results
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
ChV: Chronic Value
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
HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System
HPVIS: US EPA High Production Volume Information 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
LC50/LD50: Lethal Concentration/Dose, 50 percent
N/a: Not available or Not applicable
NFPA: US National Fire Protection Association

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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
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
BCF: Bioconcentration Factor
ESIS: European Chemical Substances Information System
Koc: Partition coefficient, soil Organic Carbon to water
SVHC: EU ECHA Substance of Very High Concern

· **Date of preparation / last revision** 03/10/2015 / 4