Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

· **Product Identifier**
· **Trade Name: EP1325LV**
· **Application of the Substance or Mixture:** One part, heat cured epoxy adhesive

· **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**

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 GHS09

· **Signal Word** Warning

· **Hazard-determining Component(s)**
Bisphenol-A-(epichlorohydrin) epoxy resin
Diglycidyl ether of neopentyl gylcol
· **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.

· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid release to the environment.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 1)

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

· **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	50-60%
CAS: 17557-23-2 EINECS: 241-536-7 Index Number: 603-094-00-7 RTECS: TX3760000	Diglycidyl ether of neopentyl gylcol Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335 Eye Dam. 2B, H320	5-<10%
CAS: 67762-90-7 EC number: 614-122-2	Siloxanes and Silicones, di-Me, reaction products with silica	1-2.5%
CAS: 1333-86-4 EINECS: 215-609-9 RTECS: FF5800000	Carbon black	0.1-<1%
CAS: 14808-60-7 EINECS: 238-878-4 RTECS: VV 7330000	Quartz Carc. 2, H351	0-<0.1%

· **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.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 2)

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 immediate medical advice.

· **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.

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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.
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
May generate ammonia gas.
Carbon oxides, Nitrogen oxide, Silicon oxide, Magnesium oxide, Formaldehyde
Metal or metal oxide dust

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Trade Name: EP1325LV

(Contd. of page 3)

· **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.

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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.
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.
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.

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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.
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.
Store away from direct sunlight.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 4)

· **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**

67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
OSHA PEL	Short-term value: 15 mg/m³
US ACGIH	Short-term value: 10 mg/m³
1333-86-4 Carbon black	
PEL	Long-term value: 3.5 mg/m³
REL	Long-term value: 3.5* mg/m³ *0.1 in presence of PAHs;See Pocket Guide Apps.A+C
TLV	Long-term value: 3* mg/m³ *inhalable fraction
14808-60-7 Quartz	
PEL	see Quartz listing
REL	Long-term value: 0.05* mg/m³ *respirable dust; See Pocket Guide App. A
TLV	Long-term value: 0.025* mg/m³ *as respirable fraction

· **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.
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**

Tightly sealed goggles

· **Body Protection** No relevant information.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 5)

· **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:**	Liquid
· **Color:**	Black
· **Odor:**	Mild epoxy odor
· **Odor Threshold:**	Not determined.
· **PH-Value at 20 °C (68 °F):**	> 7
· **Change in Condition:**	
· **Melting Point:**	Not determined.
· **Boiling Point:**	>102 °C (>216 °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.
· **Vapor Pressure:**	Not determined.
· **Vapor Density:**	not determined
· **Density at 25 °C (77 °F):**	1.30 g/cm³ (10.849 lbs/gal)
· **Solubility in or Miscibility with**	
· **Water:**	Not miscible or difficult to mix.
· **Viscosity:**	
· **Kinematic:**	Not determined.
· **Additional Information**	No further relevant information.

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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 generate flammable and or toxic mixtures when combined with alkali metals, nitrides, and strong reducing agents.
No further relevant information available.

· **Incompatible Material(s)**
Mercaptans
Amines.
Sodium hypochlorite, Nitrous acid and other nitrosating agents
Oxidizing agents

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 6)

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.

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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).
14807-96-6 Talc		
Oral	LD50	(No data available)
Epoxy Polyamine Adduct		
Oral	LD50	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol		
Oral	LD50	4500 mg/kg (rat) Reference: ChemID (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).

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

· **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.
14807-96-6 Talc		
Dermal	LD50	(Test species: n/a) (No adverse effects known) Reference: IUCLID Dataset (2000).
Epoxy Polyamine Adduct		
Dermal	LD50	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol		
Dermal	LD50	(rat) > 2000 mg/kg; end value or test detail was not available; classification was not possible.
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.

· **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)
14807-96-6 Talc		
Inhalative	LC50/4 h	(No data available) (Toxicity not anticipated under normal conditions)

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 7)

Epoxy Polyamine Adduct		
Inhalative	LC50/4 h	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol		
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.

· **Potential Health Effect(s):**
cough
sore throat
Not a classified acute inhalative hazard.
No further relevant information; classification is not possible.

· **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).
14807-96-6 Talc	
Corrosion/Irritation	not irritating (Human) There was no or very slight irritation observed in humans. (rabbit) Primary cutaneous irritation tests showed no trace of irritation in rabbits. The substance was not classified as a dermal irritant. Reference: IUCLID Dataset (2000).
Epoxy Polyamine Adduct	
Corrosion/Irritation	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
Corrosion/Irritation (static)	irritating (rabbit) (No test detail available) Based on manufacturer's (M)SDS, the substance was considered to be moderately irritating to rabbit skin. Based on NIOSH ICSC, the substance irritated eyes and skin. Reference: NIOSH ICSC (2010).
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).

· **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.
14807-96-6 Talc	
Damage/Irritation	mildly irritat. (rabbit) Slight irritation was observed after instilling the substance into conjunctival bags of rabbit eyes; the substance was classified as a mild eye irritant (Category 2B). Reference: IUCLID Dataset (2000).
Epoxy Polyamine Adduct	
Damage/Irritation	(No data available)

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 8)

17557-23-2 Diglycidyl ether of neopentyl gylcol		
Damage/Irritation	slightly (rabbit) (No test detail available) Based on manufacturer's MSDS, the substance was considered to be slightly irritating to rabbit eyes. Based on NIOSH ICSC, the substance irritated eyes and skin. Reference: NIOSH ICSC.	
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).	

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

· **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)
14807-96-6 Talc		
Sensitization	Skin	not sensitizing (Human) There were no sensitization effects in workers that were repeatedly exposed to the substance powder for many years. Reference: IUCLID Dataset (2000).
	Respiratory	(No data available)
Epoxy Polyamine Adduct		
Sensitization	Skin	(No data available)
	Respiratory	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol		
Sensitization	Skin	sensitizing (Test species: n/a) The substance was classified as a contact sensitizer. Reference: ERMA HSNO (2010) and NIOSH ICSC (2010).
	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)

· **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**

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).

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 9)

14807-96-6 Talc	
Mutagenicity	negative (salmonella typhimurium) (In Vitro (Ames tests)) In Vitro (Ames tests in S. Typhimurium) - negative with and without metabolic activation. In Vitro (DNA damage and repair assay in rat pleural mesothelial cells) - negative In Vitro (Chromosomal aberrations in human W138 cells) - negative negative (rat) (In Vivo (chromosomal aberration&dominant lethal)) In Vivo (chromosomal aberration and dominant lethal mutations; rat; oral administration of 30 - 5000 mg/kg bw) - negative; the substance did not induce any mutagenic effects in rats. Reference: IUCLID Dataset (2000).
Epoxy Polyamine Adduct	
Mutagenicity	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
Mutagenicity	(salmonella typhimurium) In Vitro (Ames tests with salmonella typhimurium; strains: TA100 and TA1535) - Positive with and without metabolic activation. Due to the absence of In Vivo test results, the substance can't be classified as a germ cell mutagen. Reference: NLM TOXNET CCRIS (2010).
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).

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

· 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.
14807-96-6 Talc	
Carcinogenicity	negative (Human) The substance has been used as medication for pleural effusions and pneumothorax for over 60 years, and did not show an increased incidence of lung cancer, or any cases of mesothelioma in 210 patients. Thus, the substance was not expected to have a carcinogenic potential for humans. Reference: IUCLID Dataset (2000). IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrous magnesium silicate) 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrous magnesium silicate) NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Epoxy Polyamine Adduct	
Carcinogenicity	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
Carcinogenicity	negative (Test species: n/a) Not listed as a carcinogen by IARC.
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)

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

· 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).

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 10)

14807-96-6 Talc	
Reproductive Toxi.	negative (Test species listed below) (No effect found in hamsters, rats, mice or rabbits) There were no teratological effects observed in hamsters, rats, mice or rabbits following a repeated oral administration with up to 1600 mg/kg/day of the substance. Reference: IUCLID Dataset (2000).
Epoxy Polyamine Adduct	
Reproductive Toxi.	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
Reproductive Toxi.	(No data available)
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
Reproductive Toxi.	(No data available)

· **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).
14807-96-6 Talc	
STOT-Single	(No data available)
Epoxy Polyamine Adduct	
STOT-Single	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
STOT-Single	(No data available)
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
STOT-Single (dynamic)	(No data available)

· **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 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).
14807-96-6 Talc	
STOT-Repeated	(rat) (Target organs: None) No significant depression of mean lifespan was observed after a repeated oral application of 100 mg/day for 101 days to rats. Reference: IUCLID Dataset (2000).
Epoxy Polyamine Adduct	
STOT-Repeated	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
STOT-Repeated	(No data available)
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
STOT-Repeated	(No data available)

· **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)
14807-96-6 Talc	
Aspiration Hazard	(No data available)

(Contd. on page 12)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 11)

Epoxy Polyamine Adduct	
Aspiration Hazard	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
Aspiration Hazard	(No data available)
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
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: CHRIP (2010).
14807-96-6 Talc	
Algae Toxicity	(No data available)
Crustacean Toxicity	(No data available)
Fish Toxicity	> 100000 mg/l (Brachydanio rerio (Zebra fish)) (LC50 (24 hrs), NFT90.303) The substance was classified as non-hazardous to aquatic environment. Reference: IUCLID Dataset (2000).
Epoxy Polyamine Adduct	
Algae Toxicity	(No data available)
Crustacean Toxicity	(No data available)
Fish Toxicity	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
Algae Toxicity	(No data available)
Crustacean Toxicity	(No data available)
Fish Toxicity	(No data available)
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).

· **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: 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.
Stability in water	(No data available)

(Contd. on page 13)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 12)

14807-96-6 Talc	
Biodegradation	(Test species: n/a) (biodegradation of the substance is not expected) As an inorganic metal compound, biodegradation of the substance is not expected.
Persistence	persistent (Test species: n/a) The substance is persistent. Reference: Canada DSL (2007).
Photodegradation	(Test species: n/a) (photodegradation of the substance is not expected) As an inorganic metal compound, photodegradation of the substance is not expected.
Stability in water	stable (Test species: n/a) The substance is expected to be hydrolytically stable in water. Reference: IUCLID Dataset (2000).
Epoxy Polyamine Adduct	
Biodegradation	(No data available)
Persistence	(No data available)
Photodegradation	(No data available)
Stability in water	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
Biodegradation	(No data available)
Persistence	(Test species: n/a) This substance is not persistent. Reference: Canada DSL (2007).
Photodegradation	(No data available)
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)

· 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.
LogPow	3.7 - 3.9 (Test species: n/a)
14807-96-6 Talc	
BCF	(Test species: n/a) (The substance is not bioaccumulative) Reference: Canada DSL (2007).
Koc	(No data available) As a natural component of soil when present, the substance has a strong potential to be absorbed to soil, sediment or sludge. The Koc value is expected be very low. Reference: IUCLID Dataset (2000).
LogPow	(Test species: n/a) (test of LogPow is not applicable) As an insoluble inorganic metal compound, test of LogPow is not applicable. Reference: IUCLID Dataset (2000).
Epoxy Polyamine Adduct	
Koc	(No data available)
LogPow	(No data available)
17557-23-2 Diglycidyl ether of neopentyl gylcol	
BCF	(Test species: n/a) The substance is not bioaccumulative. Reference: Canada DSL (2007).

(Contd. on page 14)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 13)

Koc	(No data available)
LogPow (static)	0.23 (Test species: n/a) Reference: CHRIP (2011).
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)

· **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.

· **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.

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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)

· **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

(Contd. on page 15)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 14)

· **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,S-F

· **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)**

None of the ingredients is listed.

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

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin	A, C	50-60%
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

(Contd. on page 16)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 15)

· **TSCA (Toxic Substances Control Act)**

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
14807-96-6	Talc
	Epoxy Polyamine Adduct
17557-23-2	Diglycidyl ether of neopentyl gylcol
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
1333-86-4	Carbon black
14808-60-7	Quartz

· **Proposition 65**

· **Chemicals Known to Cause Cancer**

1333-86-4	Carbon black
14808-60-7	Quartz
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)**

None of the ingredients is listed.

· **IARC (International Agency for Research on Cancer)**

14807-96-6	Talc	2B
14808-60-7	Quartz	1

· **NTP (National Toxicology Program)**

14808-60-7	Quartz	K

· **TLV (Threshold Limit Value Established by ACGIH)**

14807-96-6	Talc	A4
1333-86-4	Carbon black	A4
14808-60-7	Quartz	A2

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

14808-60-7	Quartz

· **International Regulation Lists**

· **Canadian Domestic Substance Listings:**

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
14807-96-6	Talc
17557-23-2	Diglycidyl ether of neopentyl gylcol
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
1333-86-4	Carbon black
14808-60-7	Quartz

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

None of the ingredients is listed.

· **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:**

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

(Contd. on page 17)

Safety Data Sheet
acc. to OSHA HCS

Print Date 06/17/2015 Revision Date 06/17/2015

Trade Name: EP1325LV

(Contd. of page 16)

14807-96-6	Talc
17557-23-2	Diglycidyl ether of neopentyl gylcol
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
1318-59-8	Chlorite group minerals
1333-86-4	Carbon black
14808-60-7	Quartz

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

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
14807-96-6	Talc
17557-23-2	Diglycidyl ether of neopentyl gylcol
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
1318-59-8	Chlorite group minerals
1333-86-4	Carbon black
14808-60-7	Quartz

· **Korean Existing Chemical Inventory:**

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
14807-96-6	Talc
17557-23-2	Diglycidyl ether of neopentyl gylcol
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
1318-59-8	Chlorite group minerals
1333-86-4	Carbon black
14808-60-7	Quartz

· **European Pre-registered substances:**

25068-38-6	Bisphenol-A-(epichlorohydrin) epoxy resin
14807-96-6	Talc
17557-23-2	Diglycidyl ether of neopentyl gylcol
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
1318-59-8	Chlorite group minerals
1333-86-4	Carbon black
14808-60-7	Quartz

· **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
BCF: Bioconcentration Factor
CAS: Chemical Abstracts Service (division of the American Chemical Society)
CCRIS: US NLM TOXNET Chemical Carcinogenesis Research Information System
ChemID (Full Record): US NLM Chemical Information Database (or its Full Record) designed to help search for information by chemical name or structure

(Contd. on page 18)

Safety Data Sheet
acc. to OSHA HCS

Trade Name: EP1325LV

(Contd. of page 17)

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
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)
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
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
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

· **Date of preparation / last revision** *06/17/2015 / 3*