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SDS Number: 133A
Revision Date:07/24/2015
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SAFETY DATA SHEET

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Product Name: EPOXY GLUE, PART A

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Type: Adhesive
Product Name: **Epoxy Glue, PART A (RESIN)**
Part Number(s): 10-347 Part A

Emergency Contact: Chemtrec
Phone: (800) 424-9300

SECTION 2. HAZARD(S) IDENTIFICATION

· ***Hazard Classification***

GHS08

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

GHS09

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)*** *GHS08, GHS09*

· ***Signal Word*** *Danger*

· ***Hazard-determining Component(s)***
Bisphenol-A-(epichlorohydrin) epoxy resin
Butylglycidylether

· ***Hazard statements***
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Suspected of causing cancer.
Toxic to aquatic life with long lasting effects.

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SECTION 2. HAZARD(S) IDENTIFICATION

· ***Precautionary statements***

Wear respiratory protection.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Wear eye protection / face protection.
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).
If experiencing respiratory symptoms: Call a poison center/doctor.
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***Hazard Rating System***

· ***NFPA System***

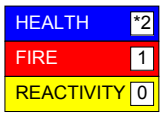
· ***NFPA Ratings (scale 0 - 4)***

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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SECTION 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%*
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* *Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2A, H319; Skin Sens. 1, H317* *Aquatic Chronic 3, H412*	*2.5-5%*
CAS: 1333-86-4 *EINECS: 215-609-9* *RTECS: FF5800000*	*Carbon black*	*1-2.5%*
CAS: 71-36-3 *EINECS: 200-751-6* *Index Number: 603-004-00-6* *RTECS: EO 1400000*	*1-Butyl alcohol* *Flam. Liq. 3, H226* *Eye Dam. 1, H318* *Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336*	*0-<0.1%*
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.

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SECTION 4. FIRST-AID MEASURES

· ***Description of First Aid Measures***

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

· ***After Inhalation***
Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing.
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
If breathing is difficult, administer oxygen.
Seek immediate medical advice.

· ***After Skin Contact***
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 rinse opened eyes for at least 15 minutes under running water.
Immediately remove contact lenses if present. Continue rinsing.
Do not put any ointments, oils or medication in eyes without specific instructions.
IMMEDIATELY transport victim to a hospital even if no symptoms develop.

· ***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*** *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:
respiratory system tests
Skin, Eye, and Reproductive system

· ***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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SECTION 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.

· ***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 CF 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.*

SECTION 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.
Allow molten product to cool.
Absorb residues with liquid-binding materials.

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SECTION 6. ACCIDENTAL RELEASE MEASURES (CONTINUED)

Avoid confined spaces, such as sewers, because of the possibility of an explosion.
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.

SECTION 7. HANDLING AND STORAGE

· ***Handling***

· ***Precautions for Safe Handling***

Obtain special instruction before use; do not handle until all safety precautions have been read and understood.
Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.
Avoid any body contact of containers or contents unless wearing appropriate personal protective equipment.
Wear respiratory protection when handling.
Keep away from incompatible material(s).
Avoid any release into the environment.
Observe all the personal protection requirements in Section 8.

· ***Information about Protection Against Explosions and Fires***

Will not burn unless preheated.
Keep away from heat, sparks, open flame and other ignition sources during handling.
Dust can combine with air to form an explosive mixture.

· ***Storage***

· ***Requirements to be Met by Storerooms and Receptacles***

Store in a well-ventilated place; provide ventilation for receptacles.
Keep stored in accordance with local, regional, national, and international regulations.

· ***Information about Storage in One Common Storage Facility***

Store away from incompatible material(s).
Store away from foodstuffs.
Avoid release to the environment.

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

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SECTION 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
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
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
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
71-36-3 1-Butyl alcohol	
PEL	Long-term value: 300 mg/m³, 100 ppm
REL	Ceiling limit value: 150 mg/m³, 50 ppm Skin
TLV	Long-term value: 61 mg/m³, 20 ppm
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

· **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 contact with skin or eye.
Do not eat, drink or smoke during work.
Contaminated work clothing is not allowed out of workplace.
Clean hands and exposed skin thoroughly after work and before breaks.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

· ***Personal Protective Equipment (PPE)***

· ***Breathing Equipment***

Where the potential for over-exposure exists, use a NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode.

· ***Hand Protection***

Protective gloves

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.
Suggested glove type(s):
Nitrile Gloves
Butyl Rubber Gloves

· ***Eye Protection***

Brief or short term use: Tightly sealed goggles

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

· ***Body Protection*** *Chemical resistant apron; cover exposed skin.*

· ***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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

· ***Information on Basic Physical and Chemical Properties***	
· ***Appearance:***	
· ***Form:***	*Paste*
· ***Color:***	*Black*
· ***Odor:***	*Mild epoxy odor*
· ***Odor Threshold:***	*Not determined.*
· ***PH-Value:***	*Not determined.*
· ***Change in Condition:***	
· ***Melting Point:***	*Not determined.*
· ***Boiling Point:***	*Not determined.*

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (CONTINUED)

· **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):** 1.26 g/cm³ (10.515 lbs/gal)
· **Solubility in or Miscibility with**
· **Water:** Not miscible or difficult to mix.
· **Viscosity:**
· **Dynamic at 20 °C (68 °F):** 600000 mPas
· **Kinematic:** Not determined.

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

SECTION 10. STABILITY AND REACTIVITY

· **Physical Hazard(s)** Not a regulated reactive or physical hazard under GHS.

· **Hazardous Reactivity and Chemical Stability** May polymerize when heated.

· **Thermal Decomposition and Conditions to be Avoided**
Keep away from incompatible material(s).
Thermally decomposes during fire or high heat; keep away from heat, sparks, open flame and other ignition sources.

· **Possibility of Other Hazardous Reaction(s)**
May ignite on contact with fluorine.
No further relevant information available.

· **Incompatible Material(s)**
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.

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SECTION 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).
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).
1333-86-4 Carbon black		
Oral	LD50	> 10000 mg/kg (rat) (Toxicity not anticipated under normal conditions) No mortality or clinical signs of toxicity were observed after an oral administration with 10000 mg/kg bw of the substance to rats. Reference: OECD SIDS (2006).

· ***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.
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).
1333-86-4 Carbon black		
Dermal	LD50	> 3000 mg/kg (Test species: n/a) (Toxicity not anticipated under normal conditions) Reference: ChemID (2010).

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

· **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)*
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).*
1333-86-4 Carbon black		
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 as a wetted form.*

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

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

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).*
1333-86-4 Carbon black	
Corrosion/Irritation	*not irritating (rabbit) (None showed any signs of skin irritation)* *Reference: OECD SID (2006).*

· ***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).*

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

2426-08-6 Butylglycidylether	
Damage/Irritation	*mildly irrit. (rabbit)* *The substance caused reversible damage to rabbit eyes when applied as drops.* *Reference: HSDB (2011).*
1333-86-4 Carbon black	
Damage/Irritation	*slightly irrit. (rabbit) (discoloration of lids and slight conjunctiva)* *No irritating effect was observed in any of test animals at any observation.* *(human)* *The substance particles may cause discoloration of lids and slight conjunctiva to human eyes.* *For safety reason, the substance was classified as mildly irritating to eyes (Category 2B).* *Reference: OECD SIDS (2006).*

· ***Potential Health Effect(s):***

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

· ***Respiratory or Skin Sensitization***		
25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin		
Sensitization	*Skin*	*sensitizing (Human)* *Based on positive results from skin sensitization tests on human volunteers and guinea pigs, GHS-J classified the substance as a dermal sensitizer.* *Reference: GHS-J (2006).*
	Respiratory	*(No data available)*
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)*
1333-86-4 Carbon black		
Sensitization	*Skin*	*not sensitizing (Human) (There were no allergies reported in humans)* *Reference: OECD SIDS (2006).*
	Respiratory	*(No data available)*

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

· ***Potential Health Effect(s):***
May cause an allergic skin reaction.
Repeated skin contact may cause dermatitis, skin rash or itchiness.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

· ***OSHA-Ca (Occupational Safety & Health Administration)***	
None of the ingredients is listed.	

· ***Germ Cell Mutagenicity***	
25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin	
Mutagenicity	*positive (Chinese hamster lung fibroblast cells) (In Vitro (Chromosomal Aberration))* *In Vitro (Chromosomal Aberration; Chinese hamster lung fibroblast cells) - Positive without metabolic activation; negative with metabolic activation.* *Positive (salmonella typhimurium) (In Vitro (Ames assay)). Due to the absence from In Vivo tests, it was not possible to make a conclusion of mutagenicity of the substance.* *Reference: NLM CCRIS (2010).*
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).*
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)* *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).*
1333-86-4 Carbon black	
Mutagenicity	*negative (salmonella typhimurium) (In Vitro (Ames test))* *In Vitro (Sister chromatid exchange assay; Chinese Hamster) - negative with and without metabolic activation.* *In Vitro (Mouse Lymphoma assay) - negative with and without metabolic activation.* *Reference: OECD SIDS (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.*
1317-65-3 Calcium Carbonate	

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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)* *The substance was listed as a suspected Carcinogen by IARC (Group 2).* *Substance is listed as Group 2 carcinogen by CLP regulations.*
1333-86-4 Carbon black	
Carcinogenicity	*positive (rat)* *Application: Inhalation* *Exposure time: 2 years* *Target Organ: Lungs* *Source: Dow Corning Q3-6611 SDS* *This substance is inextricably bound within a product and will not contribute to an inhalation hazard.*
	(Human) *This substance is inextricably bound within a product and will not contribute to an inhalation hazard.* *IARC Group 2B Possibly carcinogenic to humans. Based on inhalation studies with animals.*

· ***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.*
1333-86-4 Carbon black	
Reproductive Toxi.	*negative (Test species: n/a) (Incapable of reaching reproductive organs)* *It was very unlikely that the substance particles can reach the reproductive organs under In Vivo conditions, nor were capable of skin penetration the reproductive system. Thus, the substance was unlikely to pose a reproductive toxicity.* *Reference: OECD SIDS (2006).*

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

· ***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).*
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.*

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

1333-86-4 Carbon black	
STOT-Single	*Target: None (rat) (No effect after oral with 10000 mg/kg)* *Target organs: None* *No clinical sign of toxicity was observed after a single oral administration with 10000 mg/kg of the substance.* *Reference: OECD SIDS (2006).*

· ***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).*
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).*
1333-86-4 Carbon black	
STOT-Repeated	*Target: None (Rats and Mice) (No effect after repeated oral with 2050mg/kg/day)*

· ***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)*
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)*

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

2426-08-6 Butylglycidylether	
Aspiration Hazard	*(No data available)*
1333-86-4 Carbon black	
Aspiration Hazard	*(No data available)*

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

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

SECTION 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).*
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).*

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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)*
1333-86-4 Carbon black	
Algae Toxicity	*>1000 mg/l (Selenastrum capricornum) (LC50 (96 hrs, suspensions))*
Crustacean Toxicity	*5600 - 10000 mg/l (Daphnia magna (water flea)) (EC50 (24 hrs), OECD TG 202)*
Fish Toxicity	*>1000 mg/l (Brachydanio rerio (Zebra fish)) (LC50 (96 hrs, suspensions))*

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 cm³/molecule-sec (OH radical) (Half-life (T1/2) = 1.92 hrs)* *However, photolysis in water is negligible.*
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 cm³/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)*

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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).*
1333-86-4 Carbon black	
Biodegradation	*non-biodegrad. (Test species: n/a) (Due to being an inorganic elemental carbon)*
Persistence	*persistent (Test species: n/a)*
Photodegradation	*(Test species: n/a) (Photolysis is not expected)*
Stability in water	*stable (Test species: n/a) (Due to being an inorganic elemental carbon)*

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)*

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SECTION 12. ECOLOGICAL INFORMATION (CONTINUED)

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).*
1333-86-4 Carbon black	
BCF	*(Test species: n/a) (The substance is not bioaccumulative)* *Reference: OECD SIDS (2006).*
Koc	*(Test species: n/a) (Primarily partitions to soil, or sediment)*
LogPow	*(Not applicable) (Due to being an inorganic elemental carbon)*

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

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

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SECTION 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:***

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.*

SECTION 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*

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SECTION 14. TRANSPORT INFORMATION (CONTINUED)

· **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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SECTION 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	A, C	1-2.5%

· **Hazard Abbreviations for SARA 311/312**

A - Acute Health Hazard
C - Chronic Health Hazard
F - Fire Hazard
R - Reactive Hazard
S - Sudden Release of Pressure Hazard

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

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.

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)**

71-36-3	1-Butyl alcohol	D

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

14808-60-7	Quartz	1

· **NTP (National Toxicology Program)**

14808-60-7	Quartz	K

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SECTION 15. REGULATORY INFORMATION (CONTINUED)

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

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
1317-65-3	Calcium Carbonate
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
1333-86-4	Carbon black
71-36-3	1-Butyl alcohol
14808-60-7	Quartz

· **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
1333-86-4	Carbon black

· **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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SECTION 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*

Abbreviations and acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DOT: US Department of Transportation
HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System
IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)
ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)
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)
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
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
SARA: US Superfund Amendments and Reauthorization Act
TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions (SCAPA) of US Department of Energy (DOE)
TSCA: US Toxic Substance Control Act
ECHA: European Chemicals Agency's Dissemination portal with information on chemical substances registered under REACH
IUCLID: EU REACh International Uniform Chemical Information Database
NLM TOXNET: US National Library of Medicine Toxicology Data Network
ACToR: US EPA Aggregated Computational Toxicology Resource
BCF: Bioconcentration Factor
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
DSL: Canada Domestic Substance List
ESIS: European Chemical Substances Information System
HSDB: US NLM TOXNET Hazardous Substances Databank
HSNO CCID: New Zealand Hazardous Substances and New Organisms Chemical Classification Information Database
IATA-DGR: Dangerous Goods Regulations (DGR) by the International Air Transport Association (IATA)
ICSC: International Chemical Safety Cards
Koc: Partition coefficient, soil Organic Carbon to water
NITE: National Institute of Technology and Evaluation, Japan
OECD: Organisation for Economic Co-operation and Development
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
SIDS: OECD existing chemicals Screening Information Data Sets
SVHC: EU ECHA Substance of Very High Concern
TOXLINE: US NLM bibliographic database search system

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SECTION 16. OTHER INFORMATION (CONTINUED)

GC Electronics believes that the information contained herein is accurate and reliable as of the date of this material safety data sheet, but no representation guarantee or warranty, express or implied, is made as to the accuracy, reliability or completeness of the information. Persons receiving information are encouraged to make their own determination as to the information's suitability and completeness for their particular application.
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Product Name: EPOXY GLUE, PART B

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product Type: Adhesive
Product Name: **Epoxy Glue, PART A (HARDENER)**
Part Number(s): 10-347 Part B

Emergency Contact: Chemtrec
Phone: (800) 424-9300

SECTION 2. HAZARD(S) IDENTIFICATION

· ***Hazard Classification***

GHS09 Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2A H319 Causes serious eye irritation.

· ***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 statements***

Causes skin irritation.
Causes serious eye irritation.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

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SECTION 2. HAZARD(S) IDENTIFICATION (CONTINUED)

· ***Precautionary statements***
Wear protective gloves.
Wear eye protection / face protection.
Avoid release to the environment.
Wash thoroughly after handling.
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).
If skin irritation 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.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***Prevention***
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid release to the environment.
Wash thoroughly after handling.

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

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

Health = 3
Fire = 1
Reactivity = 0

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

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

Health = 3
Fire = 1
Reactivity = 0

· ***Other hazards***
· ***Results of PBT and vPvB assessment***
· ***PBT:*** *Not applicable.*
· ***vPvB:*** *Not applicable.*

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

· **Chemical Characterization: Mixtures**

· Composition/Information on Ingredients		
CAS: 68410-23-1	Fatty acids, C18 unsatd., dimers, reaction products with polyethylenepolyamines Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Irrit. 2, H315; Eye Irrit. 2A, H319	60-70%
CAS: 1317-65-3 EINECS: 215-279-6 RTECS: EV 9580000	Calcium Carbonate	30-40%
CAS: 67762-90-7 EC number: 614-122-2	Siloxanes and Silicones, di-Me, reaction products with silica	5-<10%

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

SECTION 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.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.

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

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

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

· **After Exposure** Seek medical treatment in case of complaints.

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

· **Indication of any Immediate Medical Attention and Special Treatment Needed**
After frequent or high intense exposure, the following medical tests are recommended:
eye tests
skin tests
Check section 11 Toxicological Information for further relevant information.

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SECTION 4. FIRST-AID MEASURES (CONTINUED)

· ***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.

SECTION 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)*** *No relevant information.*

· ***Firefighting Procedures***
Isolate fire and deny unnecessary entry.
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***
In case of fire, following can be released:
Ammonia gas may be liberated at high temperatures.
hydrocarbons
nitric acid
Carbon oxides, Nitrogen oxides, and Hydrogen if mixed with metals.
Formaldehyde, a skin and lung sensitizer and a regulated carcinogen, may be formed during fires.
Calcium oxide (CaO)
Silicon oxide (SiO_2)
Calcium oxide (CaO)

· ***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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SECTION 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.
Store in a sealed containers for disposal.
Do not use solvents unless following safe handling practices and within the recommended exposure guidelines.
Dispose contaminated chemicals as waste according to Section 13.

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

SECTION 7. HANDLING AND STORAGE

· ***Handling***
· ***Precautions for Safe Handling***
Obtain special instruction before use; do not handle until all safety precautions have been read and understood.
Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.
Wear respiratory protection when handling.
Keep away from incompatible material(s).
Avoid any release into the environment.
Observe all the personal protection requirements in Section 8.
· ***Information about Protection Against Explosions and Fires***
Will not burn unless preheated.
Keep away from heat, sparks, open flame and other ignition sources during handling.

· ***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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SECTION 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

· **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**
Do not eat, drink or smoke during work.
Keep food, drink or feed away from working area.
Contaminated work clothing is not allowed out of workplace.
Avoid any skin contact.
Clean hands and exposed skin thoroughly after work and before breaks.

· **Personal Protective Equipment (PPE)**

· **Breathing Equipment**
Caution! Improper use of respirators is dangerous.
In case of brief exposure or low pollution, use a respiratory filter device.
In case of intensive or longer exposure, use a positive-pressure respiratory protective device that is independent of circulating air.
Suggested respirator type(s):
Full Facepiece APR with high efficiency filters
Self-contained breathing apparatus (SCBA)

· **Hand Protection**

Protective gloves

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.
Suggested glove type(s):
Nitrile Gloves
Butyl Rubber Gloves

· **Eye Protection**

Tightly sealed goggles

· **Body Protection**
Where the potential for over-exposure exists, the following protective work clothing is recommended:
Tyvek® Coveralls

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

· **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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

· **Information on Basic Physical and Chemical Properties**	
· **Appearance:**	
· **Form:**	Paste
· **Color:**	Beige
· **Odor:**	Amine-like
· **Odor Threshold:**	Not determined.
· **PH-Value at 20 °C (68 °F):**	> 7
· **Change in Condition:**	
· **Melting Point:**	Not determined.
· **Boiling Point:**	140 °C (284 °F)
· **Flash Point:**	266 °C (511 °F)
· **Decomposition 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):**	1.27 g/cm³ (10.598 lbs/gal)
· **Solubility in or Miscibility with**	
· **Water:**	Soluble.
· **Viscosity:**	
· **Dynamic at 20 °C (68 °F):**	550000 mPas
· **Kinematic:**	Not determined.
· **Additional Information**	No further relevant information.

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SECTION 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 ignite on contact with fluorine.
No further relevant information available.

· ***Incompatible Material(s)***
Oxidizing agents, Acids, Cyanides
Strong reducing agents
Acid anhydrides
Strong bases
Hydrogen fluoride (HF)
Catechol
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)*** *No relevant information.*

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

SECTION 11. TOXICOLOGICAL INFORMATION

· ***Acute Toxicity***

· **Oral**		
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).*

· ***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**		
1317-65-3 Calcium Carbonate		
Dermal	*LD50*	*(-)* *No data available.*
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica		

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

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.
See acute inhalative effect(s) for further information.

· ***Inhalative***

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.*

· ***Potential Health Effect(s):***
While not a classified inhalative acute toxicity hazard, the product may cause the following symptoms:
Silicosis
Tuberculosis
Decreased pulmonary function

· ***Skin Corrosion or Irritation***

68410-23-1 Fatty acids, C18 unsatd., dimers, reaction products with polyethylenepolyamines

Corrosion/Irritation	*(Not applicable) (OECD Test Guideline 431)* *Not considered to be corrosive to skin in the in vitro skin model EpiDermTM.* *Source: ECHA REACH Dossier GLP Study 2012*

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).*

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

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

· **Eye Serious Damage or Irritation**	
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).

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

· **Respiratory or Skin Sensitization**		
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)

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

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

· **Germ Cell Mutagenicity**	
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).

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

· **Carcinogenicity**	
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)

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

· **Reproductive Toxicity**	
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)

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

· **Specific Target Organ Toxicity - Single Exposure**	
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).

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SECTION 11. TOXICOLOGICAL INFORMATION (CONTINUED)

67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
STOT-Single (dynamic)	*(No data available)*

· ***Potential Health Effect(s):***
No further relevant information; classification is not possible.
Some target organs may be exclusive due to low concentration of the hazardous component(s).

· ***Specific Target Organ Toxicity - Repeated Exposure***	
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)*

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

· ***Aspiration Hazard***	
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)*

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

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

SECTION 12. ECOLOGICAL INFORMATION

· ***Aquatic Environmental Toxicity***	
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).*

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SECTION 12. ECOLOGICAL INFORMATION (CONTINUED)

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).*

· ***Aquatic Environmental Toxicity Assessment:*** *Very toxic to aquatic life with long lasting effects.*

· ***Degradability and Stability***

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)*

· ***Bioaccumulation and Distribution***

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

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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:** No further relevant information; assessment is not possible.

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

SECTION 13. DISPOSAL CONSIDERATIONS

· **Hazardous Waste List**

· **Description:**
The product has not been evaluated for its hazards when disposed as a waste by RCRA.
However, it is necessary to contain and dispose of the product as a hazardous waste based on the Hazard Identification in Section 2.

· **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.

SECTION 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. (Polyamide Resin)
· **Transport hazard class(es)**	
· **DOT, IMDG, IATA**	
· **Class**	9 Miscellaneous dangerous substances and articles
· **Label**	9

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SECTION 14. TRANSPORT INFORMATION (CONTINUED)

· **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,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. (Polyamide Resin), 9, III

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SECTION 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)**

1317-65-3	Calcium Carbonate	A, C	30-40%
112-24-3	Triethylenetetramine	A	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)**

1317-65-3	Calcium Carbonate
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
14808-60-7	Quartz
112-24-3	Triethylenetetramine

· **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.

14808-60-7	Quartz

· **Chemicals Known to Cause Reproductive Toxicity for Females**

None of the ingredients is listed.

· **Chemicals Known to Cause Reproductive Toxicity for Males**

None of the ingredients is listed.

· **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)**

14808-60-7	Quartz	1

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SECTION 15. REGULATORY INFORMATION

· **NTP (National Toxicology Program)**		
14808-60-7	Quartz	K

· **TLV (Threshold Limit Value Established by ACGIH)**		
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:**	
1317-65-3	Calcium Carbonate
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
14808-60-7	Quartz
112-24-3	Triethylenetetramine

· **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:**	
1317-65-3	Calcium Carbonate
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
14808-60-7	Quartz
112-24-3	Triethylenetetramine

· **Japanese Existing and New Chemical Substance List:**	
1317-65-3	Calcium Carbonate
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
14808-60-7	Quartz
112-24-3	Triethylenetetramine

· **Korean Existing Chemical Inventory:**	
1317-65-3	Calcium Carbonate
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
14808-60-7	Quartz
112-24-3	Triethylenetetramine

· **European Pre-registered substances:**	
1317-65-3	Calcium Carbonate
67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
14808-60-7	Quartz
112-24-3	Triethylenetetramine

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SECTION 15. REGULATORY INFORMATION

· ***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.

SECTION 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*

· ***Abbreviations and acronyms:***

ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement Concerning the International Carriage of Dangerous Goods by Road
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DOT: US Department of Transportation
HMIS: US National Paint & Coatings Association (NPCA) Hazardous Materials Identification System
IARC: International Agency for Research on Cancer developed by United Nations World Health Organisation (WHO)
ICAO-TI: Technical Instructions (TI) by the International Civil Aviation Organization (ICAO)
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)
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
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
SARA: US Superfund Amendments and Reauthorization Act
TEEL: Temporary Emergency Exposure Limit developed by US Subcommittee on Consequence Assessment and Protective Actions (SCAPA) of US Department of Energy (DOE)
TSCA: US Toxic Substance Control Act
ECHA: European Chemicals Agency's Dissemination portal with information on chemical substances registered under REACH
IUCLID: EU REACh International Uniform Chemical Information Database
NLM TOXNET: US National Library of Medicine Toxicology Data Network
ACToR: US EPA Aggregated Computational Toxicology Resource
BCF: Bioconcentration Factor
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
DSL: Canada Domestic Substance List
ESIS: European Chemical Substances Information System
HSDB: US NLM TOXNET Hazardous Substances Databank
HSNO CCID: New Zealand Hazardous Substances and New Organisms Chemical Classification Information Database
IATA-DGR: Dangerous Goods Regulations (DGR) by the International Air Transport Association (IATA)
ICSC: International Chemical Safety Cards
Koc: Partition coefficient, soil Organic Carbon to water

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SECTION 16. OTHER INFORMATION (CONTINUED)

NITE: National Institute of Technology and Evaluation, Japan
OECD: Organisation for Economic Co-operation and Development
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
SIDS: OECD existing chemicals Screening Information Data Sets
SVHC: EU ECHA Substance of Very High Concern
TOXLINE: US NLM bibliographic database search system

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