Safety Data Sheet
acc. to OSHA HCS

Print Date 09/22/2015 Revision Date 09/22/2015

· **Product Identifier**
· **Trade Name: EP1225 BLACK A**
· **Application of the Substance or Mixture:** Epoxy Resin
· **Details of the Supplier of the Safety Data Sheet (SDS)**
· **Manufacturer or Supplier:**
Resinlab, LLC
N109 W13300 Ellsworth Drive,
Germantown, WI 53022
1-800-388-8605
www.resinlab.com
· **Information Department:** Product Safety Department: msds@resinlab.com
· **Emergency Telephone Number:**
North America - Chemtrec: 1-800-424-9300 (24 hours)
International - Chemtrec: 01-703-527-3887 (24 hours)

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2 Hazard(s) identification

· **Hazard Classification**

Skin Irrit. 2	H315	Causes skin irritation.
Eye Dam. 1	H318	Causes serious eye damage.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Repr. 2	H361	Suspected of damaging fertility or the unborn child.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

· **Label Elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Pictogram(s)**

GHS05 GHS07 GHS08 GHS09

· **Signal Word** Danger
· **Hazard-determining Component(s)**
Bisphenol-A-(epichlorohydrin) epoxy resin
Resorcinol
4-Nonylphenol, branched
· **Hazard statements**
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.
Toxic to aquatic life with long lasting effects.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Wear eye protection / face protection.
Avoid release to the environment.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Disposal** 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	40-50%
	Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	40-50%
CAS: 26142-30-3 EC number: 607-873-2	Polymer of epichlorohydrin-polyglycol	5-10%
CAS: 67762-90-7 EC number: 614-122-2	Siloxanes and Silicones, di-Me, reaction products with silica	2.5-5%
CAS: 108-46-3 EINECS: 203-585-2 Index Number: 604-010-00-1 RTECS: VG 9625000	Resorcinol Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1B, H317	1-2.5%
CAS: 84852-15-3 EINECS: 284-625-5 Index Number: 601-053-00-8	4-Nonylphenol, branched Repr. 2, H361 Skin Corr. 1B, H314; Eye Dam. 1, H318 Aquatic Chronic 1, H410 Acute Tox. 4, H302	1-2.5%
CAS: 1333-86-4 EINECS: 215-609-9 RTECS: FF5800000	Carbon black (Wetted form) Eye Dam. 2B, H320	0.1-1%

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

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4 First-aid measures

· **Description of First Aid Measures**

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

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

· **After Skin Contact**
Remove all contaminated clothing and wash before reuse.
Wash contaminated skin with water and soap and rinse thoroughly.
Seek 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:
eye tests
skin tests
Reproductive system function 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

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· **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.
Solid stream of water may spread fire; use water spray or water fog.
Cool all affected containers with flooding quantities of water.
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
isocyanic acid
Isocyanates
Formaldehyde, a skin and lung sensitizer and a regulated carcinogen, may be formed during fires.
Carbon dioxide (CO_2) and Carbon monoxide (CO)
Hydrogen cyanide (HCN)
Silicon oxide (SiO_2)

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

· **Additional Information** 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.
Allow molten product to cool.
Absorb residues with liquid-binding materials.
Avoid confined spaces, such as sewers, because of the possibility of an explosion.
For small spills:
Ventilate and wash area after clean-up is complete.
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.
Avoid any body contact of containers or contents unless wearing appropriate personal protective equipment.
Wear respiratory protection when handling.
Handle in well ventilated work space.
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.

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· **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
108-46-3 Resorcinol	
REL	Short-term value: 90 mg/m³, 20 ppm Long-term value: 45 mg/m³, 10 ppm
TLV	Short-term value: 90 mg/m³, 20 ppm Long-term value: 45 mg/m³, 10 ppm
84852-15-3 4-Nonylphenol, branched	
TEEL-1	Short-term value: 20 mg/m³
TEEL-2	Short-term value: 125 mg/m³
TEEL-3	Short-term value: 500 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

· **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.
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**

Brief or short term use: Tightly sealed goggles

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

· **Body Protection** No relevant information.

· **Additional Information**
All protective clothing (suits, gloves, footwear, headgear) should be clean, available every day, and put on before work.
The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

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9 Physical and chemical properties

· **Information on Basic Physical and Chemical Properties**
· **Appearance:**
· **Form:** Semi Paste
· **Color:** Black
· **Odor:** Mild
· **Odor Threshold:** Not determined.

· **PH-Value:** Not determined.

· **Change in Condition:**
· **Melting Point:** Not determined.
· **Boiling Point:** >260 °C (>500 °F)
· **Flash Point:** >192 °C (>378 °F) (Estimated)
· **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):** 1.12 g/cm³ (9.346 lbs/gal)
· **Solubility in or Miscibility with**
· **Water:** Not miscible or difficult to mix.
· **Viscosity:**
· **Dynamic at 20 °C (68 °F):** 150000 mPas
· **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)**
Water, moisture or humid air may cause hazardous vapors to form.
May react with strong reducing agents generating flammable hydrogen (H_2).
· **Incompatible Material(s)**
Mercaptans
Amines.
Water
Oxidizing agents
Acids
Bases (Alkalis)
Iron and iron salts
· **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).
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).		
Oral	LD50	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol		
Oral	LD50	> 4000 mg/kg (rat) (males; no test guideline available) Reference: Dow (M)SDS (2002).
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).
108-46-3 Resorcinol		
Oral	LD50	510 mg/kg (rat) Reference: Oxychem (M)SDS (2015).

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84852-15-3 4-Nonylphenol, branched		
Oral	LD50	1604 mg/kg (rat) Reference: Royce SDS (2015)

· **Potential Health Effect(s):**
While not a classified acute oral hazard, the product may cause the following symptom(s):
While not possible to classify the acute oral hazard due to missing data, the product may cause the following symptom(s):
burning sensation
diarrhea
irritation of mucous membrane
nausea
shock or collapse
weakness
headache
dizziness
Not a classified acute oral hazard.
pallor, sweating, tinnitus, and shock

· **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.
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).		
Dermal	LD50	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol		
Dermal	LD50	> 2000 mg/kg (rat) (no test guideline available) Reference: Dow (M)SDS (2002).
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.
108-46-3 Resorcinol		
Dermal	LD50	3360 mg/kg (rabbit) Reference: Oxychem 2015
84852-15-3 4-Nonylphenol, branched		
Dermal	LD50	2031 mg/kg (rabbit) Royce SDS (2015)

· **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)
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).		
Inhalative	LC50/4 h	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol		
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.
108-46-3 Resorcinol		
Inhalative	LC50/4 h	>5600 mg/l (rat) (LC0 (8 hrs, aerosol) ≥ 2.8mg/l (622 ppm)) Reference: Oxychem 2015
84852-15-3 4-Nonylphenol, branched		
Inhalative	LC50/4 h	(mouse) (Non-toxic; LC50 exceeded the satured vapor value) At 267 mg/m³ (230 ppm), there was no significant depression. At the saturated vapor concentration of 3636 mg/m³ (400 ppm) at 70 °C, there was sensory irritation observed which was rapidly gone after removal from exposure. The substance was not classified as an acute inhalative hazard under its regular use. Reference: IUCLID Dataset (2000).

· **Potential Health Effect(s):**
burning sensation
cough
dizziness or lightheadedness
headache
nausea
shortness of breath
sore throat
wheezing
dyspnea
convulsion
methemoglobinemia (blue skin, blue lips, and blue finger nails)
Not a classified acute inhalative hazard.
No further relevant information; classification is not possible.

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· **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).
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
Corrosion/Irritation	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
Corrosion/Irritation	(No data available)
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).
108-46-3 Resorcinol	
Corrosion/Irritation	irritating (rabbit) (FHSLA method; 500mg neat substance) Primary dermal irritation index (PDII): 4.4; the substance was therefore classified as irritating (Category 2) to rabbit skin based on the criteria. Reference: ECHA (2012).
84852-15-3 4-Nonylphenol, branched	
Corrosion/Irritation	corrosive (rabbit) (Directive 84/449/EEC B4; Post-exposure: 8 days) All tested animals showed signs of erythema, edema, and eschar which were not fully reversible within 8 days. Reference: IUCLID Dataset (2000).

· **Potential Health Effect(s):**
Causes skin irritation.
In contact with skin, may cause:
dryness
skin rash
redness and pain
Not a known skin irritant.

· **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.
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
Damage/Irritation	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
Damage/Irritation	(No data available)
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).
108-46-3 Resorcinol	
Damage/Irritation	corrosive (rabbit) Overall irritation score: 105/110 (FHSLA method; 0.1g neat substance; Max. score: 110; Time point: 24+48+72 hrs; mean score of all treated animals); irreversible at the end of the test; the substance was therefore classified as corrosive/ seriously damage to rabbit eyes. Reference: ECHA (2012).
84852-15-3 4-Nonylphenol, branched	
Damage/Irritation	serious irrit. (rabbit) (Draize Test) There was corneal opacity in all animals and iritis in two. Meanwhile, all treated animals showed marked conjunctival involvement with transient discharges. Thus, the substance was classified as a serious eye irritant (Category 1). Reference: IUCLID Dataset (2000).

· **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)
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).		
Sensitization	Skin	(No data available)
	Respiratory	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol		
Sensitization	Skin	(No data available)
	Respiratory	(No data available)

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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)
108-46-3 Resorcinol		
Sensitization	Skin	sensitizing (mouse) (OECD TG 429; intradermal and epicutaneous; max.25%) Stimulation Index (Concentration: 0.1%, 0.5%, 1%, 5%, and 25%) = 1.58, 2.87, 1.97, 3.51, and 5.74 respectively. Thus, the threshold positive value of 3 was exceeded at concentrations equal to 5% and the above; the substance was therefore considered as positive in this LLNA test, and as a moderate skin sensitizer based on the classification criteria. Reference: ECHA (2012).
	Respiratory	(No data available)
84852-15-3 4-Nonylphenol, branched		
Sensitization	Skin	not sensitizing (guinea pig) (Buehler test with OECD TG 406) Guinea pig maximization test - negative There was no significant difference between treated and negative controlled groups; the substance was not classified as a dermal sensitizer. Reference: IUCLID Dataset (2000).
	Respiratory	(No data available)

· **Potential Health Effect(s):**
May cause an allergic skin reaction.
No further relevant information for skin sensitization; classification is not possible.
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).
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
Mutagenicity	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
Mutagenicity	(No data available)
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).
108-46-3 Resorcinol	
Mutagenicity	negative (Test species listed below) In Vitro (Bacterial reverse mutation assay; OECD TG 471; S. typhimurium TA98, TA100, TA1535, TA1537, TA102) - negative with and without metabolic activation In Vitro (Sister chromatid exchange assay in Chinese hamster Ovary (CHO) cells) - positive with metabolic activation In Vitro (Mammalian cell micronucleus test; OECD TG 487; Human (female) lymphocyte cultures) - positive with and without metabolic activation In Vitro (Mammalian cell gene mutation assay; OECD TG 476; mouse lymphoma L5178Y cells) - negative with and without metabolic activation In Vivo (Drosophila SLRL test; Drosophila melanogaster; oral with up to 11000 ppm) - negative In Vivo (Sister chromatid exchange assay; rat; intraperitoneal with up to 100 mg/kg bw) - negative In Vivo (Micronucleus assay; OECD TG 474; rat, oral with up to 500 mg/kg bw) - negative Only negative results were observed from the In Vivo tests, the substance was therefore considered as negative for mutagenicity. Reference: ECHA (2012).
84852-15-3 4-Nonylphenol, branched	
Mutagenicity	negative (mouse) (In Vivo (Directive 79/831/EEC, B12)) In Vitro (Ames test; salmonella typhimurium) - negative with and without metabolic activation In Vitro (HGPRT assay with OECD TG 476; Chinese Hamster) - negative with and without metabolic activation In Vivo (Directive 79/831/EEC, B12; mouse) - no mutagenic effects in mouse erythrocytes were observed during the test sampling time. Reference: IUCLID Dataset (2000).

· **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.
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
Carcinogenicity	(Test species: n/a) Not listed as a carcinogen according to IARC, NTP, or OSHA. Reference: Bayer (M)SDS (2007).

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26142-30-3 Polymer of epichlorohydrin-polyglycol	
Carcinogenicity	(Test species: n/a) Not listed as a carcinogen according to ACGIH, IARC, NTP, or OSHA.
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)
108-46-3 Resorcinol	
Carcinogenicity	negative (Test species: n/a) Not listed as a carcinogen by ACGIH, NTP, or OSHA; and listed as a Group 3 carcinogen by IARC, which was not classifiable as to its carcinogenicity to humans.
84852-15-3 4-Nonylphenol, branched	
Carcinogenicity	negative (Test species: n/a) (not listed as a Carcinogen by NTP, IARC or OSHA) Reference: Hexion (M)SDS (2004).

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

· **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).
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
Reproductive Toxi.	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
Reproductive Toxi.	(No data available)
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
Reproductive Toxi.	(No data available)
108-46-3 Resorcinol	
Reproductive Toxi.	negative (rat) NOAEL (Toxicity to reproduction; OECD TG 416; both sexes; P, F0 and F1 generations; oral with up to 3000 mg/l) = 3000 mg/l; no relevant effects observed. NOAEL (Developmental toxicity; OECD TG 414; oral with up to 250 mg/kg/day; maternal toxicity) = 80 mg/kg bw/day; statistically significant body weight changes were observed in the maternal animals. NOAEL (Developmental toxicity; OECD TG 414; oral with up to 250 mg/kg/day; teratogenicity) = 250 mg/kg bw/day; no relevant effects observed. When considering all of the evidence, the substance was not classified as a reproductive hazard. Reference: ECHA (2012).
84852-15-3 4-Nonylphenol, branched	
Reproductive Toxi.	positive (rat) (NOAEL (oral) = 15 mg/kg/day) There were adverse effects on pups observed at the non-maternally toxic doses; the substance was therefore classified as a suspected reproductive hazard by EU. Reference: EPA HPVIS (2010) and REACh CLP (2012).

· **Potential Health Effect(s):**
Suspected of damaging fertility or the unborn child.
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).
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
STOT-Single	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
STOT-Single	(No data available)
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
STOT-Single (dynamic)	(No data available)
108-46-3 Resorcinol	
STOT-Single	(Human) Based on human epidemiological report, effects including restlessness, methemoglobinemia, cyanosis, dizziness, drowsiness, convulsions, tachycardia, dyspnea, decrease of body temperature, decrease of blood pressure, lower respiratory rate, jaundice, and even mortalities occurred after oral inoculation or percutaneous exposure of the substance. However, the substance was not a confirmed hazard via single exposure according to US Federal agencies. Classification was therefore not possible without further information. Reference: GHS-J (2006) and ECHA (2012).
84852-15-3 4-Nonylphenol, branched	
STOT-Single	(No data available)

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

· **Specific Target Organ Toxicity - Repeated Exposure**
25068-38-6 Bisphenol-A-(epichlorohydrin) epoxy resin

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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).
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
STOT-Repeated	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
STOT-Repeated	(No data available)
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
STOT-Repeated	(No data available)
108-46-3 Resorcinol	
STOT-Repeated	(rat) NOAEL (OECD TG 408; oral with up to 250 mg/kg bw/day) = 80 mg/kg bw/day; effects including intermittent convulsive movements and excessive salivation were observed. However, ECHA determined it as conclusive but not sufficient for classification. Reference: GHS-J (2006) and ECHA (2012).
84852-15-3 4-Nonylphenol, branched	
STOT-Repeated	(rat) (Target: Kidney via Oral routes) NOAEL (oral, 90 days) = 50 mg/kg/day; there were renal tubular epithelial degeneration and renal tubular dilatation observed from the test animals. Reference: Huntsman (M)SDS (2009), EPA HPVIS (2010), IUCLID Dataset (2000) and GHS-J (2006).

· **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)
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
Aspiration Hazard	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
Aspiration Hazard	(No data available)
67762-90-7 Siloxanes and Silicones, di-Me, reaction products with silica	
Aspiration Hazard	(No data available)
108-46-3 Resorcinol	
Aspiration Hazard	(No data available)
84852-15-3 4-Nonylphenol, branched	
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).
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
Algae Toxicity	(No data available)
Crustacean Toxicity	(No data available)
Fish Toxicity	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
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).
108-46-3 Resorcinol	
Algae Toxicity	> 97 mg/l (Pseudokirchneriella subcapitata) (EC50 (72 hrs); OECD TG 201)

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Crustacean Toxicity	1.0 mg/l (Daphnia magna (water flea)) (EC50 (48 hrs); OECD TG 202) 78 mg/l (Palaemonetes pugio) (LC50 (48 hrs); EPA 660/3-75-009) Based on the rapid-degradability and the acute EC50 = 1mg/l, the substance is classified as an Acute-1 environmental hazard.
Fish Toxicity	26.8 mg/l (Pimephales promelas (fathead minnow)) (LC50 (96 hrs); EPA-660/3/75-009) 34.7 mg/l (Leuciscus idus) (LC50 (96 hrs)) 260 mg/l (Oncorhynchus mykiss) (EC50 (60 days); OECD Draft "ELS-Test") Based on the chronic EC50 >> 1 mg/l, the substance is not classified as a chronic environmental hazard. Reference: ECHA (2012).
84852-15-3 4-Nonylphenol, branched	
Algae Toxicity	0.27 mg/l (Skeletonema costatum) (EC50 (96 hrs)) (Pseudokirchneriella subcapitata) EC50 (96 hrs) = 0.41 mg/L (Scenedesmus subspicatus) EC50 (72 hrs; Algenwachstums-Hemmtest nach UBA) = 1.3 mg/L
Crustacean Toxicity	0.15 mg/l (Hyalella azteca) (EC50 (96 hrs)) (Daphnia magna (water flea)) EC50 (48 hrs) = 0.035 mg/L Royce SDS (2015) NOEC (21 days) = 0.024 mg/L (Mysidopsis bahia) EC50 (96 hrs) = 0.043 mg/L NOEC (28 days) = 3.9 µg/L
Fish Toxicity	0.14 mg/l (Pimephales promelas (fathead minnow)) Royce SDS (2015)

· **Aquatic Environmental Toxicity Assessment:**
Toxic to aquatic life with long lasting effects.
Not a known Environmental hazard to aquatic life.

· **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)
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
Biodegradation	(No data available)
Persistence	(No data available)
Photodegradation	(No data available)
Stability in water	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
Biodegradation	(No data available) Based on the persistent properties, the substance is expected to be non-biodegradable.
Persistence	(Test species: n/a) The substance is 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)
108-46-3 Resorcinol	
Biodegradation	readily biodeg. (Test species: n/a) (OECD TG 301C; Chemical conc. 100 ppm; 2 weeks) Biodegradation (Indirect analysis from BOD) = 66.7% Biodegradation (Direct analysis from TOC, UV-vis, and HPLC) = 100%, 100%, and 100%. The substance is readily biodegradable. Reference: CHRIP (2012).
Persistence	(Test species: n/a) The substance is not persistent. Reference: Canada DSL (2007).
Photodegradation	2.0E-10 cm³/molecule-sec (OH radical) Half-life (5E5 molecule/cm³) = 0.1 day Reference: ECHA (2012).
Stability in water	(Test species: n/a) The substance has no functional groups susceptible to hydrolyze under environmentally relevant pH and temperature conditions. Reference: ECHA (2012).

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84852-15-3 4-Nonylphenol, branched	
Biodegradation	non-biodegrad. (Test species: n/a) (Read-across from 25154-52-3; OECD TG 301C) Biodegradation (Conc. 100 ppm; 2 weeks; Direct analysis from GC, UV-vis, HPLC) = 8.9, 5.3, 2.5% Biodegradation (Conc. 100 ppm; 2 weeks; Indirect analysis from BOD) = 0% The substance is non-biodegradable. Reference: NITE CHRIP (2010).
Persistence	(Test species: n/a) (The substance is not persistent) Reference: Canada DSL (2007).
Photodegradation	9.99E-11 cm³/molecule-sec (OH radical) (Half-life (5.0E5 OH/cm³) = 0.3 day) Reference: IUCLID Dataset (2000).
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)
Alkyl phenol blocked polyisocyanate (The specific chemical identity has been withheld as a trade secret per 29CFR1910-1200(i).	
BCF	(No data available)
Koc	(No data available)
LogPow	(No data available)
26142-30-3 Polymer of epichlorohydrin-polyglycol	
BCF	(No data available) The substance is not or low bioaccumulative. Reference: Canada DSL (2007).
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)
108-46-3 Resorcinol	
BCF	3.16 (Test species: n/a) (Calculated by EPISuite v 3.12) The substance is not bioaccumulative. Reference: ECHA (2012).
Koc	10.36 L/kg (Test species: n/a) (20 °C) The substance has very low soil sorption. Based on Level 3 Fugacity Modeling, the substance will partition primarily to soil (63.8%) and to a lesser extent water (36.1%). Reference: ECHA (2012).
LogPow	0.8 (Test species: n/a) (20 °C) Reference: ECHA (2012).
84852-15-3 4-Nonylphenol, branched	
BCF	90-330 (Cyprinus carpio) (The substance is not bioaccumulative) BCF = 250 - 330 (8 weeks; Concentration: 0.1 ppm) BCF = 90 - 220 (8 weeks; Concentration: 0.01 ppm) (Pimephales promelas (fathead minnow)) BCF (20 days, chemical concentration = 21 µg/L) = 271 Reference: NITE CHRIP (2010) and IUCLID Dataset (2000).
Koc	2580 - 25200 L/kg (Test species: n/a) Calculated from Log Koc = 0.989 LogPow - 0.346 and LogPow of 3.8 - 4.8. Reference: IUCLID Dataset (2000).
LogPow	3.8 - 4.8 (Test species: n/a) Reference: IUCLID Dataset (2000).

· **Degradability and Bioaccumulation Assessment:** No further relevant information; assessment is not possible.

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

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13 Disposal considerations

· **Hazardous Waste List**

· **Description:** Regulated as a hazardous waste for disposal.

· **RCRA Waste:**			
108-46-3	Resorcinol	U201	1-2.5%

· **Additional Information of the Hazardous Waste List** Classification was according to the U.S. Federal Regulation: 40 CFR 261.

· **Waste Treatment Recommendation:**
Generation of waste should be avoided or minimized wherever possible.
Chemical waste, even small quantities, is neither allowed to be poured down drains, sewage system or waterways; nor disposed with household garbage.
Dispose of contents/containers in accordance with local, regional, national, and international regulations.

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

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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, Resorcinol)

· **Transport hazard class(es)**

· **DOT, IMDG, IATA**

· **Class** 9 Miscellaneous dangerous substances and articles
· **Label** 9

· **ADR**

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

· **Packing group**
· **DOT, ADR, IMDG, IATA** III

· **Environmental Hazards:**
· **Marine Pollutant:** Yes
Symbol (fish and tree)
· **Special Marking (ADR):** Symbol (fish and tree)
· **Special Marking (IATA):** Symbol (fish and tree)

· **Special Precautions:** Warning: Miscellaneous dangerous substances and articles
· **Danger Code (Kemler):** 90
· **EMS Number:** F-A,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, Resorcinol), 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	40-50%
84852-15-3	4-Nonylphenol, branched	A	1-<2.5%
1333-86-4	Carbon black	A, C	0.1-<1%

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2530-83-8	Glycidyloxypropyltrimethoxysilane	A, C	0.1-<1%

· **Hazard Abbreviations for SARA 311/312**
A - Acute Health Hazard
C - Chronic Health Hazard
F - Fire Hazard
R - Reactive Hazard
S - Sudden Release of Pressure Hazard

· **TSCA (Toxic Substances Control Act)**
All ingredients are listed.

· **Proposition 65**

· **Chemicals Known to Cause Cancer**

1333-86-4	Carbon black
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**

67-56-1	Methanol

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

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

108-46-3	Resorcinol	3

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

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

108-46-3	Resorcinol	A4
1333-86-4	Carbon black	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **International Regulation Lists**

· **Canadian Domestic Substance Listings:**
All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**
None of the ingredients is listed.

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

67762-90-7	Siloxanes and Silicones, di-Me, reaction products with silica
108-46-3	Resorcinol

· **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:**

84852-15-3	4-Nonylphenol, branched	1-<2.5%

· **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
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
HPVIS: US EPA High Production Volume Information 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)

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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
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
ECHA: European Chemicals Agency's Dissemination portal with information on chemical substances registered under REACH
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
IUCLID: EU REACh International Uniform Chemical Information Database
Koc: Partition coefficient, soil Organic Carbon to water
NITE: National Institute of Technology and Evaluation, Japan
NLM TOXNET: US National Library of Medicine Toxicology Data Network
OECD: Organisation for Economic Co-operation and Development
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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