

Safety Data Sheet acc. to OSHA HCS

Print Date 05/01/2015

Revision Date 05/01/2015

Product Identifier

Trade Name: SEC1244 A

Application of the Substance or Mixture: Epoxy Resin

Details of the Supplier of the Safety Data Sheet (SDS)

Manufacturer or Supplier:

Resinlab, LLC
N109 W13300 Ellsworth Drive,
Germantown, WI 53022
1-800-388-8605
www.resinlab.com

Information Department: Product Safety Department: msds@resinlab.com

Emergency Telephone Number:

North America - Chemtrec: 1-800-424-9300 (24 hours)

International - Chemtrec: 01-703-527-3887 (24 hours)

2 Hazard(s) identification

Hazard Classification



GHS09 Environment

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



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

Eye Dam. 2B H320 Causes eye irritation.

Label Elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Pictogram(s)



GHS07



GHS09

Signal Word Warning

Hazard-determining Component(s)

Silver

Phenol, polymer with formaldehyde, glycidyl ether

Hazard statements

Causes skin and eye irritation.

May cause an allergic skin reaction.

Very toxic to aquatic life with long lasting effects.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

Avoid release to the environment.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

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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

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid release to the environment.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

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

Health = 2

Fire = 1

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical Characterization: Mixtures

Composition/Information on Ingredients

CAS: 7440-22-4	Silver	80-90%
EINECS: 231-131-3	Aquatic Chronic 1, H410	
CAS: 28064-14-4	Phenol, polymer with formaldehyde, glycidyl ether	10-20%
	Aquatic Chronic 2, H411	
	Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	

Classification System:

The Classifications were based on the Toxicological and Ecological Data of the substances/mixtures in the Section 11 and 12.

4 First-aid measures

Description of First Aid Measures

General Information

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

After Inhalation

Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing.

Supply fresh air and to be sure call for a doctor.

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

After Skin Contact

Gently wash contaminated skin with water and soap and rinse thoroughly.
Seek medical treatment in case of complaints.

After Eye Contact

Rinse opened eyes under running water for at least 15 minutes.
Remove contact lenses if present and easy to do so; continue rinsing.
Seek medical treatment in case of complaints.

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:

skin tests

Check section 11 Toxicological Information for further relevant information.

Additional Information

For additional information, please consult the corresponding first aid measures in the most current version of Emergency Response Guidebook which is produced by the US Department of Transportation.

5 Fire-fighting measures

Extinguishing Media

Suitable Extinguishing Agent(s)

Use fire fighting measures and extinguishing agents that suit the environment.

In case of fire, suitable extinguishing agents are:

Alcohol resistant foam.

Dry chemical or fire-extinguishing powder.

Carbon dioxide (CO₂).

Water spray or water fog.

Unsuitable Extinguishing Agent(s) Water with full jet

Firefighting Procedures

Isolate fire and deny unnecessary entry.

Immediately withdraw all personnel from the area in case of rising sound from venting safety device.

Eliminate all ignition sources if safe to do so.

Do not extinguish fire unless flow can be stopped.

Fight fire remotely due to the risk of explosion.

Burning liquids may be moved by flushing with water; protect personnel and minimize property damage.

Contain fire water runoff if possible to prevent environmental pollution.

Fight fire from protected location or safe distance.

Contain fire water runoff if possible to prevent environmental pollution.

Special Hazards Arising in Fire

Will not burn unless preheated.

In case of fire, following can be released:

Carbon dioxide (CO₂) and Carbon monoxide (CO)

Silver (Ag) dust

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.

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

6 Accidental release measures

Personal Precautions

Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.
Ensure personnel take precautions for their personal protection during clean up; see Section 8 for the specific requirements.

Environmental Precautions

Keep away from sewage system or other water courses; do not penetrate ground/soil.
Inform respective authorities in case of any seepage to the environment.

Cleaning Up Methods

Ensure adequate ventilation.
Eliminate all ignition sources.
Keep unauthorized personnel away.
For large spills:
Shut off source of leak if safe to do so.
Dike and contain.
Remove with vacuum trucks or pump to storage/salvage vessels.
Allow molten product to cool.
Absorb residues with liquid-binding materials.
For small spills:
Ventilate and wash area after clean-up is complete.
Collect spills in suitable and properly labeled containers.
Do not use solvents unless following safe handling practices and within the recommended exposure guidelines.
Dispose contaminated chemicals as waste according to Section 13.

Additional Information No further relevant information.

7 Handling and storage

Handling

Precautions for Safe Handling

Obtain special instruction before use; do not handle until all safety precautions have been read and understood.
Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during handling.
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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8 Exposure controls/personal protection

Engineering Measures or Controls

Exposure Limit Values that Require Monitoring at the Workplace

The substance/mixture does not contain any relevant quantities of substances with critical values that have to be monitored at the workplace.

Additional Information for the Limit Values

Due to the wetted form, limit values for the dust and/or aerosol form are not required.

Local exhaust must be used to maintain airborne levels below recommended exposure limits where there are inadequately ventilated environments, and/or when the mixture is heated, sprayed, or aerosolized.

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.

Clean hands and exposed skin thoroughly after work and before breaks.

Personal Protective Equipment (PPE)

Breathing Equipment

Due to the wetted form, no breathing equipment is required.

Respirator protection must be worn in cases where there are inadequately ventilated environments, and/or when the mixture is heated, sprayed, or aerosolized.

Hand Protection



Protective gloves

Selection of glove material should take into consideration the penetration times, rates of diffusion, and the degradation.

Suggested glove type(s):

Nitrile Gloves

Butyl Rubber Gloves

Eye Protection



Safety glasses

Body Protection

No relevant information.

Additional Information

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

The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

9 Physical and chemical properties

Information on Basic Physical and Chemical Properties

Appearance:

Form:

Liquid

Color:

Silver-colored

Odor:

Slight

Odor Threshold:

Not determined.

PH-Value:

Not determined.

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Change in Condition:

- **Melting Point:** Not determined.
- **Boiling Point:** > 200 °C (> 392 °F)
- **Flash Point:** >150 °C (>302 °F)

· **Decomposition Temperature:** Not determined.

· **Auto-ignition Temperature:** > 300 °C (> 572 °F)

· **Flammability:** Not determined.

· **Explosion:** Not determined.

· **Explosion Limits:**

- **Lower:** Not determined.
- **Upper:** Not determined.

· **Vapor Pressure:** Not determined.

· **Vapor Density:** not determined

· **Density at 20 °C (68 °F):** 4.09 g/cm³ (34.131 lbs/gal)

· **Solubility in or Miscibility with**

· **Water:** Not miscible or difficult to mix.

· **Viscosity:**

· **Dynamic:** Not determined.

· **Kinematic:** Not determined.

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

10 Stability and reactivity

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

· **Hazardous Reactivity and Chemical Stability** 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)** No further relevant information available.

· **Incompatible Material(s)**

aliphatic amines

Ammonia

hydrogen peroxide

Acetylene

Oxidizing agents

Acids

Bases (Alkalis)

Bromoazides; Ethyleneimine (Aziridine); Hydrogen peroxide; Oxalic acid; Oxygen; and Tartaric acid

· **Hazardous Decomposition Product(s)**

Thermally decomposes during fire or very high heat. See Section 5 for fire hazards evolved during thermal decomposition.

· **Hazardous Polymerization Product(s)** No relevant information.

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

11 Toxicological information

For detailed Toxicological Information please email the Product Safety Department.

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Acute Toxicity

Oral

7440-22-4 Silver

Oral LD50 3804 mg/kg (rat) (Read-across from silver(I) oxide; OECD TG 401)
 > 5000 mg/kg bw (rats) (Read-across from silver(I) sulfate; OECD TG 401)
 Reference: ECHA (2011).

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Oral LD50 > 5000 mg/kg (rat)
 Reference: Huntsman (M)SDS (2003).

Dermal

7440-22-4 Silver

Dermal LD50 > 2000 mg/kg (rat) (males; test guideline not available)
 Reference: NLM HSDB (2011).

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Dermal LD50 > 6000 mg/kg (rabbit)
 Reference: Huntsman (M)SDS (2003).

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

Inhalative

7440-22-4 Silver

Inhalative LC50/4 h (Test species: n/a) (Toxicity not anticipated as a wetted form)
 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 also resulted in a low acute toxicity.

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Inhalative LC50/4 h (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 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): Not a classified acute inhalative hazard.

Skin Corrosion or Irritation

7440-22-4 Silver

Corrosion/Irritation not irritating (rabbit) (OECD TG 404; 0.5g substance in water; 4 hr-contact)
 Erythema: 0.33/4 (Max. 4; Mean score of all treated animals; Time point: 24+48 hrs); fully reversible within 72 hours.
 Edema: 0/4 (Max. 4; Mean score of all treated animals; Time point: 24+48+72 hrs); the substance was therefore considered as non-irritating to rabbit skin.
 Reference: ECHA (2011).

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Corrosion/Irritation mildly irrit. (rabbit)
 Based on the manufacturer's (M)SDS, the substance was considered to be a mild dermal irritant.
 Reference: Huntsman (M)SDS (2003).

Potential Health Effect(s):

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

Eye Serious Damage or Irritation

7440-22-4 Silver

Damage/Irritation not irritating (rabbit) (OECD TG 405; 100mg substance; 1sec-contact)
 No ocular effects were noted 24, 48 or 72 hours after treatment; the substance was therefore not classified as irritating to rabbit eyes.
 Reference: ECHA (2011).

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Damage/Irritation slightly irrit. (rabbit)
 Based on the manufacturer's (M)SDS, the substance was considered to be a slight eye irritant.
 Reference: Huntsman (M)SDS (2003).

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Potential Health Effect(s):

Causes eye irritation.
 In contact with eye, may cause:
 redness and pain
 unlikely to cause corneal injuries

Respiratory or Skin Sensitization
7440-22-4 Silver

Sensitization	Skin	not sensitizing (guinea pig) (EPA OPPTS 870.2600; epicutaneous and occlusive) There were no positive reactions after dermal application with up to 50% of the substance in distilled water; the substance was not considered as a dermal sensitizer.
	Respiratory	(No data available)

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Sensitization	Skin	sensitizing (guinea pig) Based on the manufacturer's (M)SDS, this substance was considered as a moderate skin sensitizer. Reference: Huntsman (M)SDS (2003).
	Respiratory	(No data available)

Potential Health Effect(s):

May cause an allergic skin reaction.
 No relevant information for respiratory sensitization; classification is not possible.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

Germ Cell Mutagenicity
7440-22-4 Silver

Mutagenicity	negative (rat) (In Vivo (micronucleus assay; OECD TG 474)) In Vitro (Mammalian cell micronucleus test; OECD TG 487; Read-across from Silver Sulphate; human lymphocytes) - negative with and without metabolic activation. In Vitro (Mammalian cell gene mutation assay; OECD TG 476; Read-across from Silver Sulphate; mouse lymphoma L5178Y cells) - An increase in mutant frequency was observed without metabolic activation at the highest concentration; negative with metabolic activation, or without metabolic activation at other concentrations. In Vivo (micronucleus assay; OECD TG 474; Read-across from Silver nanoparticles; rats; oral with up to 1000 mg/kg bw/day) - negative; the substance did not affect either the frequency of micronucleated polychromatic erythrocytes, or the PCE/(PCE+NCE) ratio. When considering all of the evidence, the substance was not classified as mutagenic. Reference: ECHA (2011).
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28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Mutagenicity	negative (Test species: n/a) (Based on manufacturer's (M)SDS) The substance was not considered to be a mutagenic hazard. Reference: Hexion (M)SDS (2003).
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Potential Health Effect(s): Not a known Germ Cell Mutagen.

Carcinogenicity
7440-22-4 Silver

Carcinogenicity	negative (Test species: n/a) (not listed as a Carcinogen by NTP, IARC or OSHA)
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28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Carcinogenicity	negative (Test species: n/a) (Not regulated by IARC, OSHA, NTP or ACGIH)
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Potential Health Effect(s): Not a known Carcinogen.

Reproductive Toxicity
7440-22-4 Silver

Reproductive Toxi.	negative (rat) (OECD TG 414; Oral with up to 100 mg/kg/d) (Read-across from Silver (I) acetate;) NOAEL (Developmental toxicity) ≥ 100 mg/kg/day: no adverse effects. LOAEL (Maternal toxicity) = 30 mg/kg/day: weight loss. The substance was therefore not classified as a reproductive hazard. Reference: ECHA (2011).
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28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

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

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Specific Target Organ Toxicity - Single Exposure

7440-22-4 Silver

STOT-Single (No data available)

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

STOT-Single (No data available)

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

Specific Target Organ Toxicity - Repeated Exposure

7440-22-4 Silver

STOT-Repeated (No data available)

Target organ: N/A (Rat)

NOAEL (Test substance: silver nanoparticles with median diameter of 56 nm; OECD TG 408; Oral with up to 500 mg/kg bw/day) = 30 mg/kg bw/day; target organs for the silver nanoparticles were found to be livers in both male and female rats; however, diameter of this substance was over 1µm based on the vendor's TDS. Thus, the NOAEL of 30 mg/kg bw/day can't be used for classification of target organ toxicity.

Reference: ECHA (2011) and Technic TDS (2011).

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

STOT-Repeated (No data available)

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

Aspiration Hazard

7440-22-4 Silver

Aspiration Hazard (No data available)

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Aspiration Hazard (No data available)

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

Additional Information No further relevant information.

12 Ecological information

Aquatic Environmental Toxicity

7440-22-4 Silver

Algae Toxicity	4.1E-4 mg/l (Pseudokirchneriella subcapitata) (EC10 (growth rate; 24 hrs)) 1.2 µg/l (Champia parvula) (NOEC (14 days); Silver element)
Crustacean Toxicity	2.2E-4 mg/l (Daphnia magna (water flea)) (LC50 (48 hrs); Read-across from AgNO3) 2.14 µg/L (Daphnia magna) (EC10 (21 days); ASTM standard method; Read-across from AgNO3) 2.48 µg/L (Ceriodaphnia dubia) (Read-across from AgNO3; EC10 (7 days); USEPA standard method)
Fish Toxicity	0.001- 0.01 mg/l (Pimephales promelas (fathead minnow)) (LC50 (96 hrs); EPA-821/R-02-012) LC50 (96 hrs) varies with age and size of fishes: 1.2 µg/l (1-4 day old fishes); 3.37 µg/l (7 day old fishes); 5.9 µg/l (27 day old fishes); 10.4 µg/l (41 day old fishes). 0.17 µg/l (Oncorhynchus mykiss) (Read-across from AgNO3; EC10 (196 days); OECD TG 210) 0.19 µg/l (Salmo trutta) (Read-across from AgNO3; EC10 (217 days); OECD TG 210) Based on the chronic EC10 < 0.1mg/l and the non-rapid degradability, the substance is classified as a chronic-1 environmental hazard. Reference: ECHA (2011).

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Algae Toxicity	> 100 mg/l (Test species: n/a)
Crustacean Toxicity	> 100 mg/l (Test species: n/a) 3.5 mg/l (Daphnia magna (water flea))(EC50 (48 hrs))
Fish Toxicity	> 100 mg/l (Test species: n/a) 5.7 mg/l (Leuciscus idus (Ide or Orfe)) (LC50 (96 hrs)); however, it was not regulated for transport. Classification of environmental hazard is not possible without further information. Reference: Momentive (M)SDS (2012) and Dow (M)SDS (2006).

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

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Degradability and Stability

7440-22-4 Silver

Biodegradation	non-biodegrad. (Test species: n/a) (As a metal element, no degradation is possible)
Persistence	(Test species: n/a) (As a metal element, the substance is persistent) Reference: Canada DSL (2007).
Photodegradation	(Test species: n/a) (As a metal element, no degradation is possible)
Stability in water	stable (Test species: n/a) (As a metal element, it is stable in water)

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

Biodegradation	non-biodegrad. (Test species: n/a) (Biodegradation (OECD TG 301B; 28 days) = 10-16%) The substance is not biodegradable. Reference: Dow (M)SDS (2006).
Persistence	(Test species: n/a) (This substance is persistent) Reference: Canada DSL (2007).
Photodegradation	(No data available)
Stability in water	(No data available)

Bioaccumulation and Distribution

7440-22-4 Silver

BCF	70 (Cyprinus carpio) (The substance is not bioaccumulative) Reference: ECHA (2011) and Canada DSL (2007).
Koc	(No data available)
LogPow	(Test species: n/a) (As a metal element, LogPow test is not applicable)

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

BCF	(Test species: n/a) (The substance is not bioaccumulative) Reference: Canada DSL (2007).
Koc	(No data available)
LogPow	> 3 (Test species: n/a) (method not specified) Reference: Hexion (M)SDS (2004).

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

Additional Information No further relevant information.

13 Disposal considerations

Hazardous Waste List

Description: Regulated as a hazardous waste for disposal.

RCRA Waste:

7440-22-4 Silver	D011	80-90%
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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.

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. (Phenol, polymer with formaldehyde, glycidyl ether)

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

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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. (Phenol, polymer with formaldehyde, glycidyl ether), 9, III

15 Regulatory information

USA Regulation Lists
SARA (Superfund Amendments and Reauthorization Act of 1986)
Section 302 (Extremely Hazardous Substances)

None of the ingredients is listed.

Section 313 (Toxics Release Inventory (TRI) reporting)

7440-22-4 Silver

80-90%

Section 311/312 (Hazardous Chemical Inventory Reporting)

28064-14-4 Phenol, polymer with formaldehyde, glycidyl ether

A 10-<20%

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

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

122-60-1 Phenyl glycidyl ether

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)

7440-22-4 Silver

D

IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

NTP (National Toxicology Program)

None of the ingredients is listed.

TLV (Threshold Limit Value Established by ACGIH)

None of the ingredients is listed.

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

None of the ingredients is listed.

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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%)

7440-22-4 Silver

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.

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
 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
 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

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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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