



Sulfurglas Resin

SECTION 1. IDENTIFICATION

Product Identifier Sulfurglas Resin
Other Means of Identification Epoxy Based Resin
Product Family Epoxy Resin
Recommended Use Mixed with another component to form a corrosion-resistant membrane.
Restrictions on Use None known.
Manufacturer/Supplier Identifier The Stebbins Engineering and Manufacturing Company, 363 Eastern Boulevard, Watertown, NY, 13601, (315) 782-3000, www.stebbinseng.com
Emergency Phone No. Chemtrec - Within North America, 1-800-424-9300, 24 hours
Stebbins 24 Hour Contact-, 1-315-788-6624
Date of Preparation September 22, 2015

SECTION 2. HAZARD IDENTIFICATION

Classification

Acute toxicity (Oral) - Category 5; Acute toxicity (Dermal) - Category 5; Acute toxicity (Inhalation) - Category 4; Skin irritation - Category 3; Eye irritation - Category 2B; Respiratory sensitization - Category 1B; Skin sensitization - Category 1B; Aquatic hazard (Acute) - Category 1; Aquatic hazard (Chronic) - Category 2

Label Elements



Signal Word:
Danger

Hazard Statement(s):

H227 Combustible liquid.
H301 Toxic if swallowed.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statement(s):

Prevention:

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from flames and hot surfaces. – No smoking.

- P264 Wash hands and skin thoroughly after handling.
 P363 Wash contaminated clothing before reuse.
 P270 Do not eat, drink or smoke when using this product.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P271 Use only outdoors or in a well-ventilated area.
 P261 Avoid breathing dust, fume, gas, mist, vapours or spray.
 P284 In case of inadequate ventilation wear respiratory protection (NIOSH approved air-purifying respirator with an organic vapour cartridge).
 P273 Avoid release to the environment.

Response:

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE/doctor/
 P330 Rinse mouth.

P304 + P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- P302 + P352 IF ON SKIN: Wash with plenty of water.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

IF SPILLED:

- P391 Collect spillage.

Storage:

- P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

- P501 Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

Warning. Hazardous to the environment. Marine pollutant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Formaldehyde, polymer with (chloromethyl)oxirane and phenol	9003-36-5	70-85		
Phenol, polymer with formaldehyde, glycidyl ether	28064-14-4	10-25		
Butyl glycidyl ether	2426-08-6	<5.0		

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is

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difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. If breathing has stopped, trained personnel should begin rescue breathing. Avoid mouth-to-mouth contact by using a barrier device. If the heart has stopped, trained personnel should start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED).

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Clean clothing, shoes and leather goods. Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. If skin irritation or a rash occurs, get medical advice or attention. Call a Poison Centre or doctor if you feel unwell.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do. Immediately call a Poison Centre or doctor.

Ingestion

Rinse mouth with water. Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Immediately call a Poison Centre or doctor.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: can irritate the nose and throat. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest. Symptoms may develop hours after exposure and are made worse by physical effort.

If swallowed: can irritate the mouth, throat and stomach.

If on skin: causes very mild irritation. Symptoms include pain, redness, and swelling. Repeated or prolonged exposure can irritate or burn the skin.

If in eyes: may cause serious eye damage. May irritate or burn the eyes. Permanent damage including blindness may result.

If inhaled and/or on skin: in sensitized people, exposure to a very small amount of product can cause symptoms including wheezing, difficult breathing, sneezing and runny or blocked nose. Can cause death. Symptoms can develop immediately following exposure or hours later. Repeated exposure will make the reaction worse.

Immediate Medical Attention and Special Treatment

Target Organs

Respiratory system, skin.

Special Instructions

Not applicable.

Medical Conditions Aggravated by Exposure

Asthma, respiratory conditions, dermatitis, skin allergies, skin conditions.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Small fire: Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Large fire: Use flooding quantities of water spray or fog. Use foam or other suitable extinguishing agent.

Unsuitable Extinguishing Media

Do not use water jet.

Specific Hazards Arising from the Product

Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide.

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Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn. See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area.

Environmental Precautions

If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas. It is good practice to prevent releases into the environment. Minimize the use of water to prevent environmental contamination.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Contaminated absorbent poses the same hazard as the spilled product. Store recovered product in suitable containers that are: tightly-covered.

Review Section 13 (Disposal Considerations) of this safety data sheet. Contact emergency services and manufacturer/supplier for advice.

Other Information

Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Obtain special instructions before use. Only use where there is adequate ventilation. Prevent uncontrolled release of product. Avoid release to the environment. Keep containers tightly closed when not in use or empty. It is good practice to: avoid breathing product; avoid skin and eye contact and wash hands after handling. Wash hands thoroughly after handling this product and before eating, using the washroom or leaving work area.

See Section 13 (Disposal Considerations) of this safety data sheet.

Conditions for Safe Storage

Store in an area that is: type custom phrase here well-ventilated, out of direct sunlight and away from heat and ignition sources.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Not available.

Consult local authorities for provincial or state exposure limits.

Appropriate Engineering Controls

In a confined space: the hazard potential of this product is relatively low. General ventilation is usually adequate. For large scale use of this product: use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

Individual Protection Measures

Eye/Face Protection

Not required but it is good practice to wear safety glasses or chemical safety goggles.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: butyl rubber, neoprene rubber, natural rubber.

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Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge. This respirator does not protect against oxygen-deficient atmospheres.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear yellow liquid. Particle Size: Not applicable
Odour	Sweet
Odour Threshold	Not applicable
pH	Neutral
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Boiling Range	Not available
Flash Point	> 200 °F (93 °C) (closed cup)
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not available (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	> 1.0
Solubility	Insoluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	390 °F (199 °C)
Decomposition Temperature	390 °F (199 °C)
Viscosity	Not applicable (kinematic); ~ 7000 mPa.s at 20 °C (68 °F) (dynamic)
Other Information	
Physical State	Liquid
Molecular Formula	Not available
Molecular Weight	Not available
Bulk Density	~ 9.8 lb/ft ³ (0.2 kg/L)
Surface Tension	Not applicable
Vapour Pressure at 50 deg C	~ 0.00015 mm Hg (0.00002 kPa)
Saturated Vapour Concentration	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions of use.

Chemical Stability

Normally stable. Unstable under certain conditions - see Conditions to Avoid.

Possibility of Hazardous Reactions

Polymerizes in the presence of aliphatic amine and increased temperature. Releases a large amount of heat and pressure.

Conditions to Avoid

Open flames, sparks, static discharge, heat and other ignition sources. High energy sources, e.g. welding arcs. Avoid long term exposure to vapours. When mixed with curing agents; high exothermic reaction with toxic vapour may be produced. Temperatures above 163.0 °F (72.8 °C)

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Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), oxidizing agents (e.g. peroxides), strong bases (e.g. sodium hydroxide), strong acids (e.g. hydrochloric acid). Polymerizes on contact with: amines (e.g. triethylamine).

Hazardous Decomposition Products

Very toxic, flammable aldehydes; carbon monoxide. acids.

SECTION 11. TOXICOLOGICAL INFORMATION

Information presented below is for the entire product, unless otherwise specified.

Likely Routes of Exposure

Inhalation; skin contact; skin absorption; eye contact.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Formaldehyde, polymer with (chloromethyl)oxirane and phenol	Not available	> 5,000 mg/kg (male rat)	> 2,000 mg/kg (male rat)
Phenol, polymer with formaldehyde, glycidyl ether	Not available	> 5,000 mg/kg (male rat)	> 2,000 mg/kg (male rat)
Butyl glycidyl ether	> 670 ppm (rat) (vapour)	2050 ppm (rat)	788 ppm (rabbit)

LD50 (Oral)

No information was located.

LD50 (Dermal)

No information was located.

Skin Corrosion/Irritation

(Bisphenol F epoxy resin). (Butyl glycidyl ether) skin Sensitization: may cause mild irritation based on information for closely related chemicals. Symptoms include slight redness and swelling.

Serious Eye Damage/Irritation

May cause serious eye irritation based on information for closely related materials. Symptoms include slight redness and pain. The vapour also irritates the eyes.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May be harmful Symptoms may develop hours after exposure and are made worse by physical effort. Symptoms may include coughing, shortness of breath, difficult breathing and tightness in the chest.

Skin Absorption

May cause Symptoms may include redness, rash, swelling and itching. May cause damage to organs based on human experience and animal tests.

Ingestion

Harmful based on human experience and animal tests.

Aspiration Hazard

Not known to be an aspiration hazard.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

If inhaled: effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above, irritation of the respiratory system. May cause respiratory tract injury.

Respiratory and/or Skin Sensitization

Respiratory sensitizer. In sensitized people, exposure to a very small amount of product can cause symptoms including wheezing, difficult breathing, sneezing and runny or blocked nose. Can cause death. Symptoms can develop immediately following exposure or hours later. Repeated exposure will make the reaction worse. Skin sensitizer. In sensitized people, contact with a very small amount of product can cause an allergic reaction. Symptoms include redness, rash, itching and swelling. This reaction can spread from the hands or arms to the face and body. Repeated

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exposure will make the reaction worse. Sensitization may occur following exposure to the liquid or vapour.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Formaldehyde, polymer with (chloromethyl)oxirane and phenol	Not Listed	Not Listed	Not Listed	Not Listed
Phenol, polymer with formaldehyde, glycidyl ether	Not Listed	Not Listed	Not Listed	Not Listed
Butyl glycidyl ether	Not Listed	Not designated	Not Listed	Not Listed

Not specifically listed. This product contains silica, which is a known carcinogen when inhaled. However, the silica in this product is not in respirable size, and thus is not expected to present any inhalation hazards. Grinding and cutting the cured SRM mortar, could generate airborne respirable particles of silica.

Key to Abbreviations

A4 = Not classifiable as a human carcinogen.

Reproductive Toxicity

Development of Offspring

If inhaled and/or swallowed: may harm the unborn child. Known to cause: birth defects.

Sexual Function and Fertility

Not known to cause effects on sexual function or fertility.

Effects on or via Lactation

Conclusions cannot be drawn from the limited studies available.

Germ Cell Mutagenicity

May be mutagenic based on limited evidence.

Interactive Effects

No information was located.

No information was located for: Aspiration Hazard, Development of Offspring, Effects on or via Lactation, Interactive Effects

SECTION 12. ECOLOGICAL INFORMATION

Environmental information was not located. This section is not required by OSHA HCS 2012.

Ecotoxicity

Toxic to fish, algae, aquatic plants, aquatic invertebrates, based on quantitative structure-activity relationships.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Formaldehyde, polymer with (chloromethyl)oxirane and phenol	1.5 mg/L (Daphnia magna (water flea); 96-hour; semi-static)			9.4 mg/L (Desmodesmus subspicatus (algae); 72-hour; static)
Phenol, polymer with formaldehyde, glycidyl ether	1.5 mg/L (Daphnia magna (water flea); 96-hour; semi-static)			9.4 mg/L (Desmodesmus subspicatus (algae); 72-hour; static)

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

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Mobility in Soil

Studies are not available. No information was located.

Other Adverse Effects

There is no information available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Recycle and reuse product, if possible. Contact local environmental authorities for approved disposal or recycling methods in your jurisdiction.

SECTION 14. TRANSPORT INFORMATION

Not regulated under US DOT Regulations.

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT		Non-Regulated		
IATA (Air)		Non-Regulated		
Canadian TDG		Non-Regulated		
IMO (Marine)	UN3082	environmentally hazardous substance, liquid, n.o.s. (bisphenol F epoxy resin)	9	III

Environmental Hazards Environmentally Hazardous Substance (bisphenol-A-(epichlorhydrin) epoxy resin)

Special Precautions Please note: Not regulated by D.O.T., except when all or part of the transportation is by vessel.

Transport in Bulk according to International Maritime Organization Instruments

Not applicable

Emergency Response Guide No. 171

Other Information If all or part of the transportation is by vessel, this material must be classified as "Environmentally hazardous substance, liquid, n.o.s. (bisphenol F epoxy resin), UN3082, Class 9, packing group III," and as a marine pollutant. Otherwise, this material is not regulated for transport.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

This section is not required by OSHA HCS 2012.

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by the Controlled Products Regulations.

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

CEPA - National Pollutant Release Inventory (NPRI)

Not specifically listed.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

Additional USA Regulatory Lists

US Federal

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SARA Title III - Section 302: Extremely Hazardous Substances None required
 SARA Title III - Section 311/312: Acute Health Hazard, Chronic Health Hazard. Fire Hazard
 SARA Title III - Section 313: None required
 CERCLA: Not listed.
 State Regulations
 California Proposition 65: Warning Known to cause cancer
 Massachusetts Right To Know: Not listed.
 New Jersey Right To Know: Not listed.
 Pennsylvania Right To Know: Not listed.

SECTION 16. OTHER INFORMATION

NFPA Rating	Health - 2 Flammability - 1 Instability - 1
	Based on Phenol, polymer with formaldehyde, glycidyl ether
SDS Prepared By	B.E.R.
Phone No.	315-782-3000
Date of Preparation	September 22, 2015
Date of Last Revision	May 05, 2020
Revision Indicators	Revision 4 The following SDS content was changed on May 05, 2020: reviewed and approved
Key to Abbreviations	OSHA = US Occupational Safety and Health Administration NIOSH = National Institute for Occupational Safety and Health NFPA = National Fire Protection Association IARC = International Agency for Research on Cancer AIHA® = AIHA® Guideline Foundation ACGIH® = American Conference of Governmental Industrial Hygienists NTP = National Toxicology Program
References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database. Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).
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