

GHS COMPLIANT SAFETY DATA SHEET

TO COMPLY WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR.1910.1200 & THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

SECTION 1: IDENTIFICATION

PRODUCT NAME	Epoxy Hardener G-92
MFR.'S CODE ID/SYNONYMS	Epoxy Hardener G-92
CAS NUMBER	Proprietary
PRODUCT USE	Epoxy Hardener
RESTRICTIONS ON USE	For industrial use only
MANUFACTURER/SUPPLIER	Estron Chemical, Inc.
ADDRESS	807 North Main Street, Calvert City, KY 42029 USA
GENERAL INFORMATION	(270) 395-4195
EMERGENCY TELEPHONE	CHEMTREC (800) 424-9300





SECTION 2: HAZARDS IDENTIFICATION

Signal Word: *Danger*

GHS Classification

Physical	Health	Environmental
OSHA Combustible Dust	Skin Corrosion/Irritation – Category 2 Serious Eye Damage/Eye Irritation - Category 1 Skin Sensitization - Category 1 Toxic to Reproduction - Category 2 Specific Target Organ Toxicity, Single Exposure (Central Nervous System) – Category 2 Specific Target Organ Toxicity, Single Exposure (Respiratory Tract) – Category 3 Specific Target Organ Toxicity, Repeated Exposure (Bladder, Kidneys, Liver) – Category 2	Hazardous to the Aquatic Environment, Acute Hazard – Category 2 Hazardous to the Aquatic Environment, Chronic Hazard – Category 2

GHS Label

<p>Symbols: Health Hazard  Corrosion  Exclamation Mark  Environment </p>	
<p>Hazard Statements H315: Causes skin irritation H317: May cause an allergic skin reaction H318: Causes serious eye damage H335: May cause respiratory irritation H361: Suspected of damaging fertility or the unborn child H371: May cause damage to organs (Central Nervous System) H373: May cause damage to organs (Bladder, Kidneys, Liver) through prolonged or repeated exposure H411: Toxic to aquatic life with long lasting effects May form combustible dust concentrations in air.</p>	<p>Precautionary Statements <i>Prevention</i> P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P260: Do not breathe dust/fume/gas/mist/vapours/spray. P264: Wash exposed skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. <i>Response</i> P302+352: IF ON SKIN: Wash with soap and water.</p>

	<p>P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.</p> <p>P308+311: IF exposed or concerned: Call a POISON CENTER or doctor/physician.</p> <p>P310: Immediately call a POISON CENTER or doctor/physician.</p> <p>P312: Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P321: Specific treatment (see supplemental first aid instructions on this label)</p> <p>P333+313: If skin irritation or a rash occurs: Get medical advice/attention.</p> <p>P362+P364: Take off immediately all contaminated clothing and wash it before reuse.</p> <p>P391: Collect spillage.</p> <p><i>Storage</i></p> <p>P403+233: Store in a well ventilated place. Keep container tightly closed.</p> <p>P405: Store locked up.</p> <p><i>Disposal</i></p> <p>P501: Dispose of contents/container to an authorized hazardous waste handler.</p>
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HAZARDS NOT OTHERWISE CLASSIFIED: None identified.

SECTION 3: COMPOSITION/ INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS #	%	CLASSIFICATION	H Codes
Phenoxy Resin	TSCA Listed	80 - 85	OSHA Combustible Dust Skin Corrosion/Irritation – Category 2 Serious Eye Damage/Eye Irritation – Category 2A Skin Sensitization - Category 1 Acute Aquatic Toxicity – Category 2 Chronic Aquatic Toxicity - Category 2	<i>None</i> H315 H319 H317 H401 H411
Bisphenol A	80-05-7	10 – 14	Serious Eye Damage/Eye Irritation - Category 1 Skin Sensitization - Category 1 Toxic to Reproduction - Category 2 Specific Target Organ Toxicity, Single Exposure (Central Nervous System) – Category 2 Specific Target Organ Toxicity, Single Exposure (Respiratory Tract) – Category 3 Specific Target Organ Toxicity, Repeated Exposure (Bladder, Kidneys, Liver) – Category 2 Acute Aquatic Toxicity – Category 2 Chronic Aquatic Toxicity - Category 2	H318 H317 H361 H371 H335 H373 H401 H411
Heterocyclic Amine	Proprietary	5 – 7	OSHA Combustible Dust Skin Irritation – Category 2 Eye Irritation – Category 2A Specific Organ Toxicity, Single Exposure – Category 3 (Respiratory System)	<i>None</i> H315 H319 H335

(See Section 8 for Exposure Limits)

SECTION 4: FIRST-AID MEASURES

SYMPTOMS OF EXPOSURE

ACUTE Serious eye damage. Skin, eye or respiratory tract irritation. Difficulty breathing. Nausea or vomiting.

DELAYED Allergic skin reaction. Stinging, tearing, redness and swelling of the eyes. Rash, redness, itching or burning of the skin. Shortness of breath.

INHALATION May cause respiratory irritation. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

SKIN CONTACT	Causes skin irritation. May cause an allergic skin reaction. Wash thoroughly with soap and water. If skin irritation or a rash occurs: Get medical advice/attention.
EYE CONTACT	Causes serious eye damage. Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Immediately call a POISON CENTER or doctor/physician.
INGESTION	If ingested, seek medical attention. Never give anything by mouth to an unconscious person. Rinse mouth with water.
SPECIFIC TREATMENT	No other specific treatments are known or have been identified.

SECTION 5: FIRE FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION	OSHA Combustible Dust
FLAMMABLE LIMITS	LEL: No test data available UEL: No test data available
HAZARDOUS COMBUSTION PRODUCTS	Carbon monoxide and carbon dioxide.
EXTINGUISHING MEDIA	Dry Chemical, Water Fog, and CO ₂
UNUSUAL FIRE AND EXPLOSION HAZARDS	Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.
SPECIAL FIRE FIGHTING PROCEDURES	None known.
SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS	As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full (Bunker) protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Prevent contact with skin, eyes and clothing. Ensure adequate ventilation.
PROTECTIVE EQUIPMENT	See Personal Protective Equipment in Section 8.
EMERGENCY PROCEDURES	Avoid unnecessary exposure to bystanders.
ENVIRONMENTAL PRECAUTIONS	Obey relevant local, state, provincial and federal laws and regulations. Do not allow the product to enter public drainage systems or open water courses.
METHODS AND MATERIALS FOR CLEANING UP	Avoid creating excessive dust while collecting. Sweep or scoop into a suitable container for disposal

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING	Prevent contact with skin and eyes. Avoid inhalation. If necessary, use local ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, <i>Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids</i> , for safe handling.
CONDITIONS FOR SAFE STORAGE	Store locked up. Keep container tightly closed in a dry and well ventilated place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENTS	CAS #	%	ACGIH TLV	OSHA PEL
Phenoxy Resin	TSCA Listed	80 - 85	<i>None established</i>	<i>None established</i>
Bisphenol A	80-05-7	10 – 14	10mg/m ³	15 mg/m ³
Heterocyclic Amine	Proprietary	5 – 7	10 mg/m ³	10 mg/m ³

APPROPRIATE ENGINEERING CONTROLS Showers, eyewash stations and ventilation systems. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area. Use only appropriately classified electrical equipment and powered industrial trucks.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE Safety glasses, goggles or face shield.

SKIN Impervious protective gloves and clothing as appropriate to prevent skin contact for the exposure activity.

RESPIRATORY Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

HYGIENE MEASURES Handle in accordance with good industrial hygiene and safety practices. When using, do not eat, drink or smoke. Wash face, hands and any other exposed skin areas before breaks and at the end of work. Wash contaminated clothing before re-use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Clear to hazy Granules	ODOR	Mild, aromatic
ODOR THRESHOLD	No test data available	pH	No test data available
MELTING POINT	90 - 100 °C	BOILING POINT/RANGE	>200 °C
FLASH POINT	Over 200 °F	EVAPORATION RATE	No test data available
FLAMMABILITY	OSHA Combustible Dust		
FLAMMABLE LIMITS	LOWER No test data available	UPPER	No test data available
VAPOR PRESSURE	No test data available	VAPOR DENSITY	No test data available
RELATIVE DENSITY	1.2 @ 20 °C	SOLUBILITY IN H ₂ O	None
PARTITION COEFFICIENT (n-octanol/water)	No test data available	AUTOIGNITION TEMPERATURE	No test data available
DECOMPOSITION TEMPERATURE	> 250 °C	VISCOSITY	Solid material

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY This product does not pose a significant reactivity hazard when stored appropriately (see Section 7).

STABILITY Stable when maintained under recommended storage conditions.

CONDITIONS TO AVOID Dust accumulation in air or on surfaces, excessive heat, moisture and open flame.

INCOMPATIBLE PRODUCTS Strong oxidizing agents, acids, Amines, Bases.

HAZARDOUS DECOMPOSITION PRODUCTS Carbon dioxide and carbon monoxide.

POSSIBILITY OF HAZARDOUS REACTIONS Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

SYMPTOMS OF EXPOSURE

ACUTE Serious eye damage. Skin, eye or respiratory tract irritation. Difficulty breathing. Nausea or vomiting.

DELAYED Allergic skin reaction. Stinging, tearing, redness and swelling of the eyes. Rash, redness, itching or burning of the skin. Shortness of breath.

ACUTE TOXICITY

INHALATION	May cause mechanical irritation if inhaled.		
SKIN	Causes skin irritation. May cause an allergic skin reaction.		
EYES	Causes serious eye damage.		
INGESTION	May be harmful if swallowed.		
INHALATION TOXICITY	LC ₅₀ Rat, 6 hours	Bisphenol A	170 mg/m ³
DERMAL TOXICITY	LD ₅₀ Rabbit	Bisphenol A	3000 mg/kg
SKIN IRRITATION	Draize, Rabbit, 24 hours Primary Dermal Irritation Index	Bisphenol A	Mild
		No data available Heterocyclic Amine	No data, causes skin irritation
EYE IRRITATION	Draize, Rabbit, 24 hours	Bisphenol A	Severe
		Heterocyclic Amine	No data, causes eye irritation
ORAL TOXICITY	LD ₅₀ Rat	Bisphenol A	5000 mg/kg
SENSITIZATION	Skin contact may cause an allergic skin reaction		

CHRONIC EFFECTS

CARCINOGENICITY	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP or OSHA.		
MUTAGENIC EFFECTS	None known		
REPRODUCTIVE TOXICITY	Suspected human reproductive toxicant. Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.		
TARGET ORGAN EFFECTS	No test data available		

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY	Toxic to aquatic life with long lasting effects.		
TOXICITY TO FISH	LC ₅₀ Pimephales promelas, 96 hours	Polymer	1.75 mg/l
		Bisphenol A	4.6 mg/l
TOXICITY TO DAPHNIA	EC ₅₀ Daphnia magna, 48 hours	Polymer	1.7 mg/l
		Bisphenol A	1.8 mg/L
TOXICITY TO ALGAE	IC ₅₀ Pseudokirchneriella subcapitata, 96 hours	Bisphenol A	2.73 mg/l
PERSISTANCE AND DEGRADABILITY	No data available		
BIOACCUMULATIVE POTENTIAL	Indication of bioaccumulation with a low potential.		
MOBILITY IN SOIL	No data available		
OTHER ADVERSE EFFECTS	There is a potential for environmental hazard in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.		

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL	Hazardous waste, dispose of in accordance with local, state and federal regulations. Contact a licensed professional waste disposal service to dispose of this material.
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US EPA WASTE NUMBER & DESCRIPTION No information available

SECTION 14: TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

U.S. DOT

Not dangerous goods

Estron may choose to ship this product domestically as a hazardous material using one of the other codes shown in this section.

ICAO / IATA

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Technical Shipping Name (If n.o.s.): Bisphenol A epoxy resin
Hazard Class: 9

ID Number: UN 3077

Packing Group: PG III

Label: Miscellaneous

Marine Pollutant: Marine Pollutant

IMDG

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Technical Shipping Name (If n.o.s.): Bisphenol A epoxy resin
Hazard Class: 9

ID Number: UN 3077

Packing Group: PG III

Label: Miscellaneous

Marine Pollutant: Marine Pollutant

ADR/RID

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Technical Shipping Name (If n.o.s.): Bisphenol A epoxy resin
Classification: 9

UN#: 3077

Packing Group: III

TDG

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.

Technical Shipping Name (If n.o.s.): Bisphenol A epoxy resin
Hazard Class: 9

ID Number: UN 3077

Packing Group: PG III

Label: Miscellaneous

Marine Pollutant: Marine Pollutant

SECTION 15: REGULATORY INFORMATION

The components in this product are either listed or exempt from listing due to polymer exemption criteria for the following chemical listing inventories as indicated by an "X":

AICS	Australian Inventory of Chemical Substances	
DSL	Canadian Domestic Substances List	
ECL	Korean Existing Chemicals List	
ELINCS	European List of Notified Chemical Substances	
ENCS	Japanese Existing and New Chemical Substances	X
IECSC	Inventory of Existing Chemical Substances in China	X
ISRAEL	Proposed Israel Hazardous Substances List	
NDSL	Canadian Non-Domestic Substances List	X
NZIoC	New Zealand Inventory of Chemicals	X
PICCS	Philippines Inventory of Chemicals and Chemical Substances	X
SWISS	Giftliste 1 and Inventory of Notified New Substances	X
TCSI	Taiwan Chemical Substances List	X
TSCA	US Toxic Substances Control Act	X

INTERNATIONAL REGULATIONS

EU REGULATION (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization, *Substances of Very High Concern*: This product contains Bisphenol A, an ECHA SVHC listed substance.

REACH All components of this product are not REACH registered. Import limitations may apply.

EINECS All of the components of this product are included on the European Inventory of Existing Commercial Chemical Substances.

C.D. 96/82/EC Council Directive 96/82/EC, Annex I not mentioned by name. With regard to possibly appropriate decomposition products see Chapter 10.

WHMIS (Canada) Class D-2B: Material causing other toxic effects (Toxic).

FEDERAL REGULATIONS

SARA 313 This product does not contain any chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA Section 311/312 (40 CFR 370) Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	Yes
Pressure Hazard	No
Reactivity Hazard	No

CERCLA This product, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional or state level pertaining to releases of this product.

CLEAN AIR ACT This product does not contain any substances regulated as hazardous air pollutants (HAPS under Section 112 of the Clean Air Act Amendments of 1990.

U.S. STATE REGULATIONS

RIGHT TO KNOW The Listing requirements of the Right to Know (RTK) legislation varies by state. All information for NJ, PA, MA and other states can be derived from the listing of hazardous and non-hazardous components in Sections 2 and 15 of this Safety Data Sheet.

CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

WARNING! This product contains a chemical (Bisphenol A) known to the State of California to cause birth defects or other reproductive harm.

SECTION 16: OTHER INFORMATION

DISCLAIMER This product is intended for industrial use only and should be used in accordance with the manufacturer's recommendations. Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. This SDS has been prepared in accordance with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

DATE OF REVISION April 9, 2018, *replaces the June 14, 2016 version.*

REASON FOR REVISION Updated the hazard information associated with Bisphenol A based on latest supplier information in Sections 2, 3 and 12. Revised the Appearance in Section 9. Added Bisphenol A warning to Section 15, EU regulation. Changed REACH warning and changed ECN to TCSI in Section 15.

SDS PREPARED BY Glen Pearson

SDS APPROVED BY Robert Auerbach