EPO-Guard™ EPO-203, EPO-204, EPO-205 Part A

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Epoxy Resin
Product Name **/** Trade Name	EPO-Guard™ EPO-203, EPO-204, EPO-205 Part A Component
CAS No.	Epoxy Resin

Details of the supplier of the safety data sheet

Company Identification	Res-Tek, Inc. 110 Riverside Drive Cartersville, Georgia 30120 United States of America
Telephone	1-888-737-8351 / 1-770-427-4034
Emergency telephone number	CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Hazard classification

GHS Classification: Skin irrit. 2; Eye irrit. 2A; Skin sens 1B; Acute aquat. Tox. 2; Chronic aquat. tox. 2

Label elements

Hazard pictograms

Signal Word(s): **WARNING**

Hazard Statement(s)

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

Prevention

Avoid breathing dust/ fumes/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.
Wear protective gloves and eye protection/face protection.

Hazards not otherwise classified: May cause sensitization by skin contact.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Concentration
Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	25085-99-8	60% – 90%
Alkyl glycidyl ether	68609-97-2	5% – 20%
Proprietary additive	Trade secret	0.1% - 5%

Chemical family: liquid epoxy resin

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice

Seek medical advice. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately.

Inhalation

If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Move to fresh air.

Skin Contact

Immediately remove contaminated clothing, and any extraneous chemical, if possible to do so without delay. Initiate and maintain continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour. Cover wound with sterile dressing. Take off contaminated clothing and shoes immediately. NOTE TO PHYSICIANS: Application of corticosteroid cream has been effective in treating skin irritation.

Eye Contact

Hold eyelids apart, initiate and maintain gentle and continuous irrigation until the patient receives medical care. If medical care is not promptly available, continue to irrigate for one hour.

Ingestion

Do not induce vomiting without medical advice. If a person vomits when lying on his back, place him in the recovery position. Never give anything by mouth to an unconscious person. Prevent aspiration of vomit. Turn victim's head to the side.

Most important symptoms and effects, both acute and delayed

Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease. Skin disorders and Allergies. Asthma. Neurological disorders.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media	Water fog of fine spray. Carbon dioxide (CO2). Dry chemical. Dry sand.

Special hazards arising from the substance or mixture

Specific hazards	Smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics. Carbon monoxide. Carbon dioxide.
Special protective equipment for fire-fighters	Avoid contact with the skin. A face shield should be worn. Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.
Further information	Do not allow run-off from fire fighting to enter drains or water courses. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear suitable protective clothing, gloves and eye/face protection. Use self-contained breathing apparatus and chemically protective clothing. Evacuate personnel to safe areas.
Environmental precautions	Construct a dike to prevent spreading.
Methods and material for containment and cleaning up	Contact Res-Tek for advice. Approach suspected leak areas with caution. Place in appropriate chemical waste container.
Additional advice	Open enclosed spaces to outside atmosphere. If possible, stop flow of product.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	Use only in well-ventilated areas. Avoid breathing vapors and/or aerosols. Avoid contact with skin and eyes. Avoid contact with eyes. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations. Use personal protective equipment. When using, do not eat, drink or smoke.
Conditions for safe storage	Do not store near acids. Keep containers tightly closed in a dry, cool and well-ventilated place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure measures	Provide readily accessible eye wash stations and safety showers. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits.

Personal protection equipment

Respiratory protection 	Wear appropriate respirator when ventilation is inadequate.
Skin protection (Hand protection/ Other)  	Butyl-rubber Nitrile rubber. Neoprene gloves. Impervious gloves. PVC disposable gloves. Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Impervious clothing. Full rubber suit (rain gear). Rubber or plastic boots. Slicker Suit.
Eye/face protection 	Full face shield with goggles underneath. Chemical resistant goggles must be worn.
Special instructions for protection and hygiene	Discard contaminated leather articles. Wash hands at the end of each work shift and before eating, smoking or using the toilet. Provide readily accessible eye wash stations and safety showers.
Exposure limit(s)	None established.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Viscous. Liquid.
Odor	Odorless to mild.
Odor threshold	Not available.
pH	Not applicable.
Melting point /range	Not applicable.
Boiling point/range	608 ºF (320 ºC)
Flash Point	264 – 268°C (507 – 514°F) at 102.89 hPa
Evaporation rate (Butyl Acetate = 1)	Not available.
Flammability (solid, gas)	Not applicable.
Lower explosion limit	Not determined.
Upper explosion limit	Not determined.
Vapor pressure	<0.0000001 Pa EC Method A4
Relative vapor density	Not determined.
Relative density	1.13 at 25°C
Water solubility	5.4 – 8.4 mg/l at 20° C (68° F) EU Method A.6
Partition coefficient: n-octanol/water	Log Pow: 3.242 Estimated
Autoignition temperature	Not determined.
Decomposition temperature	No data available.
Viscosity	11,000 – 14,000mPa.sat77°F(25°C).
Molecular weight	No data available.

SECTION 10: STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions.
Conditions to avoid	Short term exposures to temperatures above 300°C. Potentially violent decomposition can occur above 350°C. Generation of gas during decomposition can cause pressure in closed systems.

Materials to avoid	Avoid contact with oxidizing materials. Acids and amines.
Hazardous decomposition products	Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.
Possibility of hazardous reactions/reactivity	No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Likely routes of exposure

Effects on eye	Causes eye irritation.
Effects on skin	Causes skin irritation.
Inhalation effects	Harmful if inhaled and may cause delayed lung injury. May cause nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system.
Ingestion effects	No data available.
Symptoms	Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause: Sore throat. Eye disease., Skin disorders and Allergies., Asthma.

Acute toxicity

Acute oral toxicity	LD50 : 15,000 mg/kg Species : Rat.
Inhalation	LC50 (4h) : Species : Rat : not been determined.
Acute dermal toxicity	LD50 : 23,000 mg/kg Species : Rabbit.
Skin corrosion/irritation	Moderate skin irritation.
Serious eye damage/eye irritation	Moderate eye irritation.
Sensitization	Sensitization has occurred in laboratory animals after repeated exposures.

Chronic toxicity or effects from long-term exposure

Carcinogenicity	Many studies have been conducted to assess the potential carcinogenicity of diglycidyl either of bisphenol A (DGEBA). Indeed, the most recent review of the available data by the international Agency for Research on Cancer (IARC) has concluded the DGEBA is not classified as a carcinogen.
Reproductive toxicity	Resins based on the diglycidyl ether of bishphenol A (DGEBA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.
Specific target organ systemic toxicity (single exposure)	Evaluation of the available data suggests that this material is not an STOT-SE toxicant.
Specific target organ systemic toxicity (repeated exposure)	Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

Aspiration hazard	Based on the physical properties, not likely to be an aspiration hazard.

Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

This product contains no listed carcinogens according to IARC, ACGIH, NTP and/or OSHA in concentrations of 0.1 percent or greater. May cause allergic skin reaction. Eye disease., Skin disorders and Allergies., Asthma.

COMPONENTS INFLUENCING TOXICOLOGY

Propane, 2,2-bis[p-(2.3-epoxypropoxy)phenyl]-, polymers

Acute inhalation toxicity
The LC50 has not been determined.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Acute toxicity in fish	Material is moderately toxic to aquatic organisms on the acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).
Toxicity to fish	LC50 (96 h) : 2 mg/l Species : Rainbow trout (Oncorhynchus mykiss)
Acute toxicity to aquatic invertebrates	EC50 (48 h) : 1.8 mg/l Species : Water flea (Daphnia magna)
Acute toxicity in algae/aquatic plants	ErC50 (72 h) : 11 mg/l Species : Scenedesmus capricorntum (fresh water algae)
Toxicity to bacteria	IC50 (18h) : >42.6 mg/l Bacteria, Respiration rates.
Biodegradability	No data available.
Mobility	No data available.
Bioaccumulation	No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste from residues/unused products	Contact supplier if guidance is required.
Contaminated packaging	Dispose of container and unused contents in accordance with federal, state, and local requirements.

SECTION 14: TRANSPORT INFORMATION

DOT	Not regulated for transport
IATA	
UN/ID number	UN 3082
Proper shipping name	Environmentally hazardous substance, liquid, N.O.S., (Epoxy Resin)
Class or division	9
Packing group	III
Marine pollutant	Yes

IMDG

UN/ID number	UN 3082
Proper shipping name	Environmentally hazardous substance, liquid, N.O.S., (Epoxy Resin)
Class or division	9
Packing group	III

Further Information

The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact Res-Tek, Inc.

SECTION 15: REGULATORY INFORMATION

Toxic Substance Control Act (TSCA) 12(b) Component(s): None

Country	Regulatory list	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on EINECS inventory or polymer substance, monomers included on EINECS inventory or no longer polymer.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification Acute Health Hazard

EPA SARA Title III Section 313 (40 CFR 372) Component(s) above 'de minimus' level None.

US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)
This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

SECTION 16: OTHER INFORMATION

Hazard Rating System HMIS	Health: 1 Flammability: 1 Physical hazard: 2
Information source and references	This SDS is prepared by Res-Tek from information supplied by internal references within our company.

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