POLYMER SCIENCE CORPORATION

SAFETY DATA SHEET

1. IDENTIFICATION

1.1 Product identifier

Trade name : PSC 2301ClearGuard Epoxy Resin Part “A:
Chemical name : Bisphenol A Diglycidyl Ether Resin Solution

1.2 Recommended use of the product and restrictions on use

Recommended use : Industrial Use
Non- recommended use(s) : None known

1.3 Details of the supplier of the safety data sheet

Company : Polymer Science Corporation.
: Unit 1133, 6027 – 79 Avenue S.E
: Calgary, Alberta. Canada T2C 5P1
Telephone : 403 287 2751
Fax : 403 287 2766
Website : www.polymersciencecorp.com

1.4 Emergency telephone number

Emergency In case of emergency call 403 796 9826 or 403 510 2051

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Eye Damage/Irritation Category 2B
Skin Corrosion/Irritation Category 2

2.2 Label Elements

Symbol :

Signal word : Warning
Hazard statement : Causes eye irritation
Causes skin irritation
May cause an allergic skin reaction
Toxic to aquatic life with long lasting effects
Precautionary Statements : wash thoroughly after handling
: If on skin: wash the area with plenty of water.
: If in eyes: rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation occurs: Get medical attention
If eye irritation persist: Get medical attention
Take off contaminated clothing and wash it before reuse it.
Wear protective gloves / protective clothing / eye protection / face protection.
Use only outdoors or in a well ventilated area.
Avoid release to the environment
In case of eye contact rinse with water. In case of contact with the skin, wash the area with soap and water.
Use absorbent material in case of a spill. Dispose accordingly.
Keep containers in well ventilated area away from heat sources.

3 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

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3.2 Mixtures

Chemical Name / other Names	C.A.S.#	Concentration % by Weight.
Bisphenol A Diglycidyl Ether Resin / Epoxy Resin./ Bisphenol A Epichlorohydrin resin./ Epichlorohydrin-4.4 isopropylidenediphenol resin.	25068-38-06	75 - 95

A percentage concentration range is provided, due to the fact that the actual concentration is withheld as a trade secret.

4 FIRST AID MEASURES

EYE CONTACT:	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. If eye irritation persists: Get medical attention.
SKIN CONTACT:	Wash with soap and water or use waterless hand cleaners. Do not use solvents or thinners to clean skin. Get medical attention if irritation persists.
INHALATION:	Should symptoms develop, remove victim to fresh air. If breathing is difficult, qualified personnel may administer oxygen. If victim is not breathing start artificial respiration. Get medical attention.
INGESTION:	Give liquids if victim is conscious. Never give anything by mouth to an unconscious person. Do not induce vomiting unless directed by a physician. Immediately calla POISON CENTER / Doctor

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media : Dry chemical, CO2, water spray or regular foam
Unsuitable extinguishing media : Full water jet, because this may spread the fire.
5.2 Hazards
Flammable properties and hazards : Product is not considered a fire hazard. Containers can build up pressure if exposed to heat.
Hazardous combustion products : Hazardous decomposition products formed under fire conditions are Carbon dioxide and Carbon monoxide.
5.3 Fire-fighting instructions:
Do not inhale combustion gases. Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures.
Use personal protective equipment. Wear chemical safety glasses, rubber boots and heavy rubber gloves.
Ensure adequate ventilation
6.2 Environmental precautions
Do not allow to enter drains, waterways, sewers, basements or confined areas.
Do not discharge into the subsoil / soil. Absorb spills with inert material and place in a chemical waste container.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid all personal contact. Use personal protective equipment. Use adequate ventilation.
7.2 Hygiene considerations.
Wash hands before breaks and after work. Remove soiled or soaked clothing immediately. Wash contaminated clothes before reuse. Do not eat, drink or smoke when handling this product.
7.3 Safe storage procedures
Keep away from heat. Keep containers tightly closed in a dry well ventilated place.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 EXPOSURE LIMITS

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	OTHER LIMIST
Bisphenol A Diglycidyl Ether Resin	25068-38-6	No data	No data	No data

8.2 EXPOSURE CONTROLS
ENGINEERING CONTROLS
Good general ventilation should be sufficient to control airborne levels.
PERSONAL PROTECTIVE EQUIPMENT
Respiratory Equipment : Normally when good engineering controls are used, no respiratory protection is needed
Eye Protection : Use tightly fitting chemical splash goggles. Wear face protection, wear as appropriate.
Hand Protection : Use impermeable gloves. Neoprene gloves
Body Protection : Use impervious clothing and chemical resistant boots. Consider using resistant coveralls and aprons, if extensive exposure is possible.
Other Protective Equipment : Ensure that eyewash stations and safety showers are close to the workstation location.
General Hygiene Consideration : Do not breathe mist or vapor. Avoid all contact. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Do not take contaminated clothes home.
Environmental Exposure Controls : Avoid runoff into storm sewers and ditches which lead to waterways. May be hazardous to the environment if released in large quantities

9 PHYSICAL AND CHEMICAL PROPERTIES

Odour : Odorless,faint, can barely be detected.
Odour threshold : Not available. Consulted several sources.
PH : 5 - 6
Melting Point : It is Liquid at room temperature. Not applicable
Freezing Point : Crystallizes at less than 12 ºC
Initial Boiling Point : Greater than 260. ºC
Boiling Range : Not applicable, decomposes when heated.
Flash Point : Greater than 93 ºC
Evaporation rate : Slower than n-Butyl Acetate
Flammability : Combustible
Upper Flammability : Not Available after searching in several sources

Lower Flammability	: Not Available after searching in several sources
Vapor Pressure	: 1.1 x 10 -7 mm Hg at 25 ºC
Vapor Density	: Relative vapor density (air = 1) 11.7
Specific Gravity/relative density	: 1.0 – 1.2 g/ cm^3
Solubility in water	: Negligible, less than 1 mg/mL
Partition coefficient (n-octanol/water	: Log octanol/water partition coefficient (log Pow) is estimated, using a structural fragment method, to be 3.84.
Auto-Ignition Temperature	: greater than 260 ºC
Decomposition Temperature	: greater than 260 ºC
Viscosity	: 2500 cP
VOC content	: 0
Other Properties	: Clear, slightly yellow liquid

10 STABILITY AND REACTIVITY

Reactivity	Product will not heat by itself. A mass of one pound of product mixed with aliphatic amine ½ pound will cause polymerization with significant heat build-up. Strong acids, bases, amines and mercaptans can cause polymerization.
Stability	Stable under normal conditions
Hazardous Polymerization	Will not occur under normal conditions.
Conditions to avoid	Avoid excessive heat.
Incompatibility with other materials	Strong acids, bases, amines and mercaptans can cause polymerization. External heating or self-heating could result in rapid temperature increase and pressure build-up. If such condition were to occur in a drum, the drum could expand and rupture violently.
Hazardous decomposition products	Carbon monoxide, carbon dioxide and phenolics may be produced during uncontrolled exothermic reactions or when otherwise heated to decomposition

11 TOXICOLOGICAL INFORMATION

11.1 Routes of Exposure or entry.
Due to its low vapor pressure, it is not likely to enter the human body through inhalation. Also, it is not likely to enter through ingestion. The likely routes of exposure are skin contact and eye contact.

11.2 Symptoms related to the physical, chemical and toxicological characteristics.
Contact with skin or eyes can cause minimal skin irritation or eye irritation. Prolonged exposure to skin can cause skin sensitization.

11.3 Acute Toxicity.
Epoxy resin has a low acute oral toxicity in rats, mice and rabbits with an LD_{50} greater than 15000 mg/ kg by weight. The acute dermal toxicity is also very low when tested on rabbits with an LD_{50} of 20 mL/kg by weight. And the dermal toxicity in rats and mice is LD_{50} greater than 1200 and 800 mg/kg by weight respectively.
Small skin contact can cause slight irritation, more prolonged and repeated contact can cause more severe irritation.

No evidence of being a carcinogen, no evidence of teratogenic or embryo toxicity.

12 ECOLOGICAL INFORMATION

12.1 General Ecological Information
Avoid release to the environment. Toxic to aquatic life with long lasting effects.

12.2 Ecotoxicity
Toxic to aquatic organisms (LC50 between 1 and 10 mg/L)

12.3 Persistence and degradability.
Not readily biodegradable.

12.4 Bioaccumulation potential
No data available

12.5 Mobility in soil
Not reported, unknown.

13 DISPOSAL CONSIDERATIONS

Waste Disposal Method
Incinerate or dispose of unused material, residues and containers in a licensed facility in accordance with all applicable local, state and federal regulations. Do not discharge substance/product into sewage system.

14 TRANSPORT INFORMATION

14.1 Identification, UN number	: Not Regulated
14.2 Shipping Name	: Epoxy Resin
14.3 Hazard Class	: Not Applicable
14.4 Packing Group	: Not applicable

Transport over land ADR/RID	: Not regulated for transport
Transport over sea IMDG	: Not regulated for transport
Transport by air ICAO/IATA	: Not regulated for transport

15 REGULATORY INFORMATION

DSL: All Ingredients are listed under the Canada DSL
This product has been classified in accordance with the hazard criteria of the controlled products regulations and the SDS contains all the information required by it.

16 OTHER INFORMATION

Preparation Date	: January 2, 2024
SDS prepared by	: Polymer Science Corp. 403 287 2751

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