

OPTICALLY CLEAR EPOXY

8322-PART A

# Safety Data Sheet

## Section 1: Product and Company Identification

### Product Identifier and Other Means of Identification

**Product Name:** Optically Clear Epoxy; Encapsulating and Potting Compound**SDS Code:** 8322-Part A**Related Part #** 8322-1, 8322-2, 8322-3

### Recommended Use and Restriction on Use

**Use:** Epoxy resin for use with hardeners**Uses Advised Against:** Not available

### Details of Manufacturer or Importer

**Manufacturer**MG Chemicals  
1210 Corporate Drive  
Burlington, Ontario L7L 5R6  
CANADAMG Chemicals (Head Office)  
9347-193 Street  
Surrey, British Columbia V4N 4E7  
CANADA**☎** +1-800-340-0772**FAX** +1-800-340-0773**E-MAIL** [support@mgchemicals.com](mailto:support@mgchemicals.com)**WEB** [www.mgchemicals.com](http://www.mgchemicals.com)**☎** +1-905-331-1396**FAX** +1-905-331-2682**E-MAIL** [info@mgchemicals.com](mailto:info@mgchemicals.com)**E-MAIL** (Competent Person): [sds@mgchemicals.com](mailto:sds@mgchemicals.com)

### Emergency Phone Number

**For hazardous material incidents ONLY**—leaks, spills, fires, exposures or accidentsUSA or CANADA: Call CHEMTREC ☎: **1-800-424-9300****For emergencies involving dangerous goods;** Collect 24/7CANADA: Call CANUTEC ☎: **1-613-996-6666** or **\*666** on cellular phones

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**Section 2: Hazard(s) Identification**


**Classification of Hazardous Chemical**

**GHS Categories**

Criteria		Category	Signal Word	Pictograms
Sensitization	Skin	1B	Warning	Exclamation
Skin Irritation		2	Warning	Exclamation
Environmental Hazard	Chronic Aqua. Tox.	3	<i>none</i>	<i>none</i>

*Note:* The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.

**Label Elements**

<b>Signal Word</b>	<b>WARNING</b>
<b>Pictograms</b>	<b>Hazard Statements</b>
	H317: May cause an allergic skin reaction H315: Causes skin irritation
No Symbol Mandated	H412: May cause long lasting harmful effects to aquatic life
<b>Prevention</b>	<b>Precautionary Statements</b>
P102	Keep out of reach of children.
P261	Avoid breathing fumes/mist/vapors.
P280	Wear protective gloves/eye protection/face protection.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.

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<b>Response</b>	<b>Precautionary Statements</b>
P302 + P352	IF ON SKIN: Wash with plenty of water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
<b>Storage</b>	<b>Precautionary Statements</b>
<i>None</i>	<i>None</i>
<b>Disposal</b>	<b>Precautionary Statements</b>
P501	Dispose of contents/container in accordance to local/regional/international regulations.

**Hazards Not Otherwise Classified**

<b>HCS2012 Criteria</b>	<b>Hazard Statements/Precautionary Statement</b>	<b>Signal Word</b>	<b>Pictograms</b>
None	None	None	None

**Section 3: Composition/Information on Ingredients**

<b>CAS #</b>	<b>Chemical Name</b>	<b>%(weight)</b>
30583-72-3	cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane	>90%

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**Section 4: First-Aid Measures**

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
<b>IF ON SKIN</b>	P302 + P352, P333 + P313, P362 + P364
<b>Immediate Symptoms</b>	<i>irritation, rash, redness</i>
<b>Response</b>	Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
<b>IF IN EYES</b>	P305 + P351 + P338
<b>Immediate Symptoms</b>	<i>mild irritation, redness, tearing</i>
<b>Response</b>	Rinse cautiously with water for 15 minutes or more. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>IF INHALED</b>	P304 + P340, P312
<b>Immediate Symptoms</b>	<i>irritation</i>
<b>Response</b>	Remove person to fresh air and keep comfortable for breathing.
<b>IF SWALLOWED</b>	P301 + P330, P331
<b>Immediate Symptoms</b>	<i>irritation</i>
<b>Response</b>	Rinse mouth. Do NOT induce vomiting.

**Section 5: Fire-Fighting Measures**

<b>Extinguishing Media</b>	Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.
<b>Specific Hazards</b>	Not flammable or combustible, but burns if involved in a fire. Produces irritating smoke of unknown toxicity in fires. Prevent fire-fighting wash from entering waterway or sewer system.
<b>Combustion Products</b>	Produces carbon oxides (CO, CO <sub>2</sub> ), and aldehydes
<b>Fire-Fighter</b>	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

**OPTICALLY CLEAR EPOXY****8322-PART A****Section 6: Accidental Release Measures**

<b>Personal Protection</b>	See personal protection recommendations in Section 8.
<b>Precautions for Response</b>	Avoid breathing the fumes/mist/vapors. Remove or keep away all sources of extreme heat or open flames.
<b>Environmental Precautions</b>	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
<b>Containment Methods</b>	Contain with inert and non-flammable absorbent (such as soil, sand, vermiculite).
<b>Cleaning Methods</b>	Collect liquid in a sealable, chemical-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wash residue with a paper towel wetted with alcohol, ethyl lactate, or another suitable organic solvent; and place dirty towels in container. Use soap and water to remove the last traces of residue.
<b>Disposal Methods</b>	Dispose of spill waste according to Section 13.

**Section 7: Handling and Storage**

<b>Prevention</b>	Keep out of reach of children. Avoid breathing fumes/mist/vapors.
<b>Handling</b>	Wear protective gloves/eye protection/face protection. Wash hands thoroughly after handling. Contaminated clothing should not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse. Avoid release to the environment.
<b>Storage</b>	Keep container tightly closed. Store in a well-ventilated area.

**OPTICALLY CLEAR EPOXY****8322-PART A****Section 8: Exposure Controls/Personal Protection****Substances with Occupational Exposure Limit Values**

Contains no substances with occupational exposure limits.

*Note:* The ACGIH<sup>1</sup>, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from by RTECS<sup>2</sup> database and data from suppliers' SDS were also consulted.

**Engineering Controls**

**Ventilation** Keep airborne concentrations below the occupational exposure limits (OEL).

**Personal Protective Equipment**

**Eye protection** Wear appropriate protective eyeglasses or chemical safety goggles.

**Recommendation:** Ensure that glasses have side shields for lateral protection.

**Skin Protection** For likely contacts, use of protective butyl rubber or other chemically resistant gloves.

For incidental contacts, use nitrile or other chemically resistant gloves.

**Respiratory Protection** For over-exposures up to 10 x OEL of mist/vapors/spray, wear respirator such as a half-mask respirator with organic vapor cartridges.

Above 10 x OEL, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus.

**RECOMMENDATION:** Consult your local safety supply store to ensure your respirator has filter cartridges appropriate for the ingredients listed in section 3 of this SDS, and that the respirator is fitted to the employee by a professional.

**General Hygiene Considerations**

Wash hands thoroughly with water and soap after handling.

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**Section 9: Physical and Chemical Properties**

<b>Physical State</b>	Liquid	<b>Lower Flammability Limit</b>	Not available
<b>Appearance</b>	Clear	<b>Upper Flammability Limit</b>	Not available
<b>Odor</b>	Mild	<b>Vapor Pressure<sup>b)</sup> @20 °C</b>	<3.5×10 <sup>-10</sup> mmHg [<5.0×10 <sup>-10</sup> hPa]
<b>Odor Threshold</b>	Not available	<b>Vapor Density</b>	>1 (Air =1)
<b>pH</b>	Not available	<b>Specific Gravity @25 °C</b>	1.09
<b>Freezing/Melting Point</b>	<10 °C [<50 °F]	<b>Solubility in Water</b>	Insoluble
<b>Boiling Point</b>	Not available	<b>Partition Coefficient</b>	Not available
<b>Flash Point<sup>a)</sup></b>	115 °C [239 °F]	<b>Auto-ignition Temperature</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Decomposition Temperature</b>	Not available
<b>Flammability (solid, gas)</b>	Not available	<b>Viscosity @25 °C</b>	2300 cSt

a) Pensky-Martens closed cup value

b) Based on vapor pressure for similar composition product

**Section 10: Stability and Reactivity**

<b>Reactivity</b>	At room temperature, reacts exothermically with alkali substances including amines, mercaptans, and Lewis acids. At 200 °C, vigorous polymerization will occur in the presence of caustic soda (sodium hydroxide).
<b>Chemical Stability</b>	Chemically stable at normal temperatures and pressures
<b>Conditions to Avoid</b>	Avoid ignition sources, open flames, and incompatible substances.
<b>Incompatibilities</b>	Strong oxidizing agents, strong bases (alkali)
<b>Polymerization</b>	Will not occur
<b>Decomposition</b>	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

**OPTICALLY CLEAR EPOXY****8322-PART A****Section 11: Toxicological Information****Routes of Exposure**

Eye Contact, Ingestion, Inhalation, and Skin Contact

**Symptoms Summary**

<b>Eyes</b>	May cause mild eye irritation, redness or tearing.
<b>Skin</b>	Causes irritation, rash, and redness.
<b>Inhalation</b>	May cause nose, throat and lung irritation.
<b>Ingestion</b>	See inhalation symptoms.
<b>Chronic</b>	Prolonged or repeated exposure to the uncured epoxy resin may cause sensitization (allergies).

**Acute Toxicity (Lethal Exposure Concentrations)**

<b>Chemical Name</b>	<b>LD50 oral</b>	<b>LD50 dermal</b>	<b>LC50 inhalation</b>
cyclohexanol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane	Not available	Not available	Not available

*Note:* Toxicity data from the RTECS<sup>2</sup> and ECHA were consulted. The data from supplier (M)SDS were also consulted.

**Other Toxicological Effects**

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met.
<b>Sensitization</b> (allergic reactions)	May cause skin sensitization in humans
<b>Carcinogenicity</b> (risk of cancer)	Not classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP
<b>Mutagenicity</b> (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.

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<b>Reproductive Toxicity</b> (risk to sex functions)	Based on available data, the classification criteria are not met.
<b>Teratogenicity</b> (risk of fetus malformation)	Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met. There is no category 1 components, and the kinematic viscosity is >20.5 mm <sup>2</sup> /s at 40 °C.

**Section 12: Ecological Information**

Ecological classifications are based on the IMDG/GHS criteria in conjunction with ecotoxicological data from our suppliers, the European Chemical Agency database (<http://echa.europa.eu>), and other reliable sources.

The epoxy resin (CAS#30583-72-3) is an acute category 3 environmental toxicant with minimal LC50 of 11.5 mg/L for *Oncorhynchus mykiss* (rainbow trout); EC50 28.3 mg/L 48 h *Daphnia magna* (water flea).

**Acute Ecotoxicity**

Category 3

Harmful to aquatic life

Avoid release to the environment. Collect spillage

**Chronic Ecotoxicity**

Category 3

Harmful to aquatic life with long lasting effects

**Biodegradability**

Not readily biodegradable.

**Other Effects**

Regulated Volatile Organic Content (VOC) = 100% (1088 g/L)

**Section 13: Disposal Information**

Dispose of contents in accordance with all local, regional, national, and international regulations.

**OPTICALLY CLEAR EPOXY****8322-PART A****Section 14: Transport Information****Ground**

**Refer to TDG** (Canadian Transportation of Dangerous Goods regulations) and **USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Not Regulated	
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**Air**

**Refer to ICAO-IATA Dangerous Goods Regulations.**

Not Regulated	
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**Sea**

**Refer to IMDG regulations.**

Not Regulated	
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**Section 15: Regulatory Information****Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

All hazardous ingredients are listed on the DSL/NDSL.

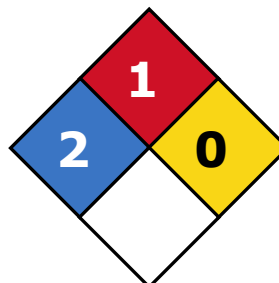
**Industry and Science Canada**

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

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**OPTICALLY CLEAR EPOXY****8322-PART A****USA****HMIS<sup>®</sup> RATING**

<b>HEALTH:</b>	<b>* 2</b>
<b>FLAMMABILITY:</b>	<b>1</b>
<b>PHYSICAL HAZARD:</b>	<b>0</b>
<b>PERSONAL PROTECTION:</b>	

**NFPA<sup>®</sup> 704 CODES**

*Approximate HMIS and NFPA Risk Ratings Legend:*

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

**CAA** (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product does not contain substances that are listed as hazardous air pollutants.

**EPCRA** (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain substances, which are subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

**TSCA** (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

**California Proposition 65** (Chemicals known to cause cancer or reproductive toxicity, June 06, 2014 revision, USA).

This product does not contain any listed substances in California.

**Europe****RoHS** (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, or PBDE's, and complies with European RoHS regulations.

**WEEE** (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

**OPTICALLY CLEAR EPOXY****8322-PART A****Section 16: Other Information****SDS Prepared by** Michel Hachey**Date of Creation** 15 July 2016**Supersedes** 18 December 2013**Reason for Changes:** Formatting change to better meet HCS 2012 and WHMIS 2015 requirements.**References**

- 1) ACGIH 2013 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2013).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50%
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content

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**Technical Queries** Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at [www.mgchemicals.com](http://www.mgchemicals.com).

Email: [support@mgchemicals.com](mailto:support@mgchemicals.com)

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