

HIGH TEMPERATURE EPOXY

832HT-PART A

# Safety Data Sheet

## Section 1: Identification

### Product Identifier and Other Means of Identification

**Product Name:** High Temperature Epoxy: Encapsulating and Potting Compound

**SDS Code:** 832HT-Part A

**Related Part #** 832HT-375ML, 832HT-3L, 832HT-60L

### Recommended Use and Restriction on Use

**Use:** Epoxy resin for use with hardeners to pot devices or encapsulate components

**Uses Advised Against:** Not for use as a spray coating

### Details of Manufacturer or Importer

#### Manufacturer

MG Chemicals  
1210 Corporate Drive  
Burlington, Ontario L7L 5R6  
CANADA

MG Chemicals (Head Office)  
9347-193 Street  
Surrey, British Columbia V4N 4E7  
CANADA

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**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 accidents

USA or CANADA: Call CHEMTREC ☎: **+1-800-424-9300**

**For emergencies involving dangerous goods;** Collect 24/7

CANADA: Call CANUTEC ☎: **+1-613-996-6666** or **\*666** on cellular phones

**HIGH TEMPERATURE EPOXY**
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**Section 2: Hazard(s) Identification**
**Classification of Hazardous Chemical**
**GHS Categories**

Criteria	Category	Signal Word	Pictograms
Sensitization	Skin	1	Warning
Eye Irritation		2	Warning
Skin Irritation		2	Warning
Hazardous to the Aquatic Environment	Chronic	2	<i>none</i>
			Exclamation
			Exclamation
			Exclamation
			Environment

*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>
	H319: Causes serious eye irritation H315: Causes skin irritation H317: May cause an allergic skin reaction
	H411: Toxic to aquatic life with long lasting effects
<b>Prevention</b>	<b>Precautionary Statements</b>
P102	Keep out of reach of children.
P261	Avoid breathing fumes/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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Response	Precautionary Statements
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P332 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
Disposal	Precautionary Statements
P501	Dispose of contents/container in accordance to local/regional/international regulations.

**Hazards Not Otherwise Classified**

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
None	None	None	None

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

CAS #	Chemical Name	%(weight)
28064-14-4	phenyl glycidyl ether/ formaldehyde copolymer	98%
25068-38-6	bisphenol-A epoxy resin (reaction product)	1%
1333-86-4	carbon black	0.4%

**Section 4: First-Aid Measures**

Exposure Condition	GHS Code/Symptoms/Precautionary Statements
<b>IF IN EYES</b>	P305 + P351 + P338, P337 + P313
<b>Immediate Symptoms</b>	<i>redness, severe irritation, pain</i>
<b>Response</b>	Rinse cautiously with water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

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<b>IF ON SKIN</b>	P302 + P352, P332 + P313, P362 + P364
<b>Immediate Symptoms</b>	<i>redness, irritation, dry skin, allergic contact dermatitis</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 INHALED</b>	P304 + P340
<b>Immediate Symptoms</b>	<i>cough, irritation of the respiratory track</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 toxic fumes.
<b>Fire-Fighter</b>	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

**HIGH TEMPERATURE EPOXY****832HT-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 fumes/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/vapors. Avoid release to the environment.
<b>Handling</b>	Wear protective gloves/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly after handling. Collect spillage.
<b>Storage</b>	Keep in a dry and clean area, away from incompatible substances.

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**Section 8: Exposure Controls/Personal Protection**
**Substances with Occupational Exposure Limit Values**

Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
carbon black <sup>a)</sup>	ACGIH	3.5 mg/m <sup>3</sup>	Not established
	U.S.A. OSHA PEL	3.5 mg/m <sup>3</sup>	Not established
	Canada AB	3.5 mg/m <sup>3</sup>	Not established
	Canada BC	3 mg/m <sup>3</sup>	Not established
	Canada ON	3.5 mg/m <sup>3</sup>	Not established
	Canada QC	3.5 mg/m <sup>3</sup>	Not established

*Note:* Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH<sup>1</sup>, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from the RTECS<sup>2</sup> database and from suppliers' SDS were also consulted. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

a) Respirable airborne particles

**Engineering Controls**
**Ventilation**

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

Because the carbon black is bound to the liquid mixture, it does not present an airborne hazard under normal use. Ensure adequate ventilation if the product is mechanically misted or aerosolized.

**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.

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**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 that your respirator has a NIOSH (U.S.) approved filter cartridges appropriate for the ingredients listed in Section 3. The respirator should be fitted to the employee by a professional. Ensure vapor cartridges are stored in sealed plastic bags when not being used.

**General Hygiene Considerations**

Wash hands thoroughly with water and soap after handling.

**Section 9: Physical and Chemical Properties**

<b>Physical State</b>	Liquid	<b>Lower Flammability Limit</b>	Not available
<b>Appearance</b>	Black	<b>Upper Flammability Limit</b>	Not available
<b>Odor</b>	Mild	<b>Vapor Pressure @20 °C</b>	Not available
<b>Odor Threshold</b>	Not available	<b>Vapor Density</b>	Not available
<b>pH</b>	Not available	<b>Specific Gravity @25 °C</b>	1.17
<b>Freezing/Melting Point</b>	Not available	<b>Solubility in Water</b>	Insoluble
<b>Boiling Point</b>	≥150 °C [≥302 °F]	<b>Partition Coefficient</b>	Not available
<b>Flash Point</b>	150 °C [302 °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>	≥44 000 mm <sup>2</sup> /s

**HIGH TEMPERATURE EPOXY****832HT-PART A****Section 10: Stability and Reactivity**

<b>Reactivity</b>	Reacts exothermically with amines.
<b>Chemical Stability</b>	Chemically stable at normal temperatures and pressures
<b>Conditions to Avoid</b>	Avoid ignition sources, open flames, and incompatible substances. Do not use in away that forms mist or aerosolizes the product.
<b>Incompatibilities</b>	Strong oxidizing agents, strong acids, alkaly
<b>Polymerization</b>	Will not occur
<b>Decomposition</b>	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

**Section 11: Toxicological Information****Routes of Exposure**

Skin contact, Inhalation, Eye contact, and Ingestion

**Symptoms Summary**

<b>Eyes</b>	May cause redness, severe irritation, or pain.
<b>Skin</b>	May cause skin redness, irritation, dry skin, or allergic contact dermatitis.
<b>Inhalation</b>	May cause cough and respiratory irritation.
<b>Ingestion</b>	May cause irritation. (see inhalation symptoms)
<b>Chronic</b>	Prolonged and repeated exposure may lead to skin sensitization.

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**Acute Toxicity (Lethal Exposure Concentrations)**

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
phenyl glycidyl ether/ formaldehyde copolymer	4 000 mg/kg Rabbit <sup>a)</sup>	Not established	6 000 mg/kg Rabbit <sup>a)</sup>
reaction products: bisphenol- A-(epichlorhydrin) and epoxy resin <sup>b)</sup>	11 400 mg/kg Rat	Not established	Not established
carbon black	>15 g/kg Rat	>3 g/kg Rabbit	Not established

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

a) Supplier MSDS

b) Referred to as bisphenol-A epoxy resin (reaction product)

**Other Toxicological Effects**
**Skin corrosion/irritation**

Causes skin irritation.

**Serious eye  
damage/irritation**

Causes serious eye irritation.

**Sensitization  
(allergic reactions)**

Skin sensitizer based on animal studies on the epoxy components

**Carcinogenicity  
(risk of cancer)**

The carbon black [1333-86-4] is possibly carcinogenic by airborne routes of exposures under WHMIS.

Because the carbon black is bound in the epoxy liquid mixture, it is not available as an airborne hazard (dust, mist, or spray) under normal use.

**Carbon Black [1333-86-4]**

IARC Group 2B: Possibly carcinogenic to humans

ACGIH A4: Not classified as a human carcinogen

CA Prop 65: Listed as a carcinogen (airborne, as unbound particles of respirable size)

NTP: Not listed

**Mutagenicity  
(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.

In Europe, similar epoxy resin mixtures with CAS# 28064-14-4 and CAS# 25068-38-6 are generally classified as chronic category 2 marine pollutant due to LC50 96 h of >1 mg/L but ≤10 mg/L.

Based on available data, carbon black is not classified as environmental hazards according to GHS criteria.

**Acute Ecotoxicity**

Category 2

Toxic to aquatic life

**Chronic Ecotoxicity**

Category 2

Toxic to aquatic life with long lasting effects

Avoid release to the environment. Collect spillage.

**Biodegradability**

Not readily biodegradable

**Bioaccumulation**

Not available

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### Section 13: Disposal Information

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

### Section 14: Transport Information

#### Ground

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

Sizes 5 L and under

**Limited Quantity**

**Note:** The 832HT-375ML, 832HT-3L and 832HT-12L are composed of separate containers which meet this inner packaging limit.



Sizes greater than 5 L

**UN number:** UN3082

**Shipping Name:**  
ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, LIQUID, N.O.S.  
(Reaction product: phenyl glycidyl  
ether/ formaldehyde copolymer)

**Class:** 9

**Packing Group:** III

**Marine Pollutant:** Yes



#### Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes 5 L and under

**Limited Quantity**



Excepted Quantity

E2 ≤30 mL

Sizes greater than 5 L

**UN number:** UN3082

**Shipping Name:**  
ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, LIQUID, N.O.S.  
(Reaction product: phenyl glycidyl  
ether/ formaldehyde copolymer)

**Class:** 9

**Packing Group:** III

**Marine Pollutant:** Yes



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**HIGH TEMPERATURE EPOXY****832HT-PART A****Sea**

Refer to IMDG regulations.

Sizes 5 L and under

**Limited Quantity**

**Note:** The 832HT-375ML, 832HT-3L and 832HT-12L are composed of separate containers which meet this inner packaging limit.



Sizes greater than 5 L

**UN number:** UN3082**Shipping Name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Reaction product: phenyl glycidyl ether/ formaldehyde copolymer)

**Class:** 9**Packing Group:** III**Marine Pollutant:** Yes

*Note:* Shipper must be appropriately trained and certified before involvement with the transport of dangerous goods.

**Section 15: Regulatory Information****Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

All hazardous ingredients are listed on the DSL.

**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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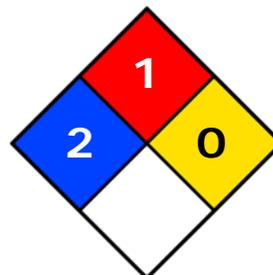
### USA

#### Other Classifications

##### HMIS® RATING

HEALTH:	* 2
FLAMMABILITY:	1
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

##### NFPA® 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 contains carbon black, but it is bound and exposures during normal conditions of uses are below the Safe Harbor Threshold.

### 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.

**HIGH TEMPERATURE EPOXY****832HT-PART A****Section 16: Other Information**

<b>SDS Prepared by</b>	Michel Hachey
<b>Date of Review</b>	14 November 2016
<b>Supersedes</b>	26 November 2015
<b>Reason for Changes:</b>	Change to California Proposition 65 statement in section 15.

**Reference**

- 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
IARC	International Agency for Research on Cancer
NOELR	No observable effect loading ratio
NTP	National Toxicology Program
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
SDS	Safety Data Sheet
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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