

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART A

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: Black Flexible Epoxy Encapsulating and Potting Compound (Part A)

SDS Code: 832FX-Part A

Related Part # 832FX-450ML, 832FX-1.7L, 832FX-7.4L, 832FX-40L

Recommended Use and Restriction on Use

Use: Epoxy resin for use with hardeners

Uses Advised Against: Not applicable

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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E-MAIL support@mgchemicals.com

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☎ +1-905-331-1396

FAX +1-905-331-2682

E-MAIL info@mgchemicals.com

E-MAIL (Competent Person): 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

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART A

Section 2: Hazard(s) Identification



Classification of Hazardous Chemical

GHS Categories

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

Signal Word	WARNING
Pictograms	Hazard Statements
	H317: May cause an allergic skin reaction H319: Causes serious eye irritation H315: Causes skin irritation
	H411: Toxic to aquatic life with long lasting effects
Prevention	Precautionary Statements
P102	Keep out of reach of children.
P261	Avoid breathing fumes/vapors.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/eye protection/face protection.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.

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Continued ...

Response	Precautionary Statements
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.
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.
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)
25085-99-8	propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers	74%
41638-13-5	polyglycol, epichlorohydrin polymer	13%
68609-97-2	alkyl glycidyl ether	11%
25068-38-6	bisphenol-A epoxy resin (reaction product) ^{a)}	1%
1333-86-4	carbon black	0.4%

 a) Average molecular weight of ≤ 700

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Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	<i>redness, irritation, pain</i>
Response	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.
IF ON SKIN	P302 + P352, P333 + P313, P362 + P364
Immediate or Delayed Symptoms	<i>redness, irritation, dry skin, allergic contact dermatitis</i>
Response	Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
IF INHALED	P304 + P340, P312
Immediate Symptoms	<i>cough, irritation of the respiratory track</i>
Response	Remove person to fresh air and keep comfortable for breathing. If you feel unwell: Get medical advice/attention.
IF SWALLOWED	P301 + P330, P331
Immediate Symptoms	<i>irritation</i>
Response	Rinse mouth. Do NOT induce vomiting.

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.
Specific Hazards	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.
Combustion Products	Produces carbon oxides (CO,CO ₂) and toxic fumes.
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART A**Section 6: Accidental Release Measures**

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Avoid breathing the fumes/vapors. Remove or keep away all sources of extreme heat or open flames.
Environmental Precautions	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
Containment Methods	Contain with inert and non-flammable absorbent (such as soil, sand, vermiculite).
Cleaning Methods	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.
Disposal Methods	Dispose of spill waste according to Section 13.

Section 7: Handling and Storage

Prevention	Keep out of reach of children. Avoid breathing fumes/vapors or contact with skin or eyes. Avoid release to the environment.
Handling	Wear protective gloves/clothing/eye protection. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly after handling. Collect spillage.
Storage	Not Applicable

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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 ^{a)}	ACGIH	3.5 mg/m ³	Not established
	U.S.A. OSHA PEL	3.5 mg/m ³	Not established
	Canada AB	3.5 mg/m ³	Not established
	Canada BC	3 mg/m ³	Not established
	Canada ON	3.5 mg/m ³	Not established
	Canada QC	3.5 mg/m ³	Not established

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH¹, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from RTECS² 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

Physical State	Liquid	Lower Flammability Limit	Not available
Appearance	Black	Upper Flammability Limit	Not available
Odor	Mild	Vapor Pressure @20 °C	Not available
Odor Threshold	Not available	Vapor Density	>>1 (Air =1)
pH	Not available	Specific Gravity @25 °C	1.13
Freezing/Melting Point	Not available	Solubility in Water	Negligible
Boiling Point ^{a)}	≥150 °C [≥302 °F]	Partition Coefficient	Not available
Flash Point ^{b)}	142 °C [287 °F]	Auto-ignition Temperature ^{b)}	≥235 °C [≥455 °F]
Evaporation Rate	Not available	Decomposition Temperature	Not available
Flammability (solid, gas)	Not available	Viscosity @25 °C	809 cP

a) Component with the lowest value—bisphenol-A epoxy resin (reaction product)

b) Component with the lowest value— alkyl glycidyl ether closed cup

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Section 10: Stability and Reactivity

Reactivity	Reacts exothermically with amines.
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Ignition sources, open flames, and incompatible substances
Incompatibilities	Strong oxidizing agents, strong acids, alkaly
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

Section 11: Toxicological Information

Routes of Exposure

Skin Contact, Eye Contact, Inhalation, and Ingestion

Symptoms Summary

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

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
alkyl glycidyl ether	19 200 mg/kg Rat	4 500 mg/kg Rat	Not established
reaction products: bisphenol-A-(epichlor-hydrin) and epoxy resin ^{a)}	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 RTECS² and ECHA were consulted. The data from supplier (M)SDS were also consulted.

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

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BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART A**Other Toxicological Effects**

Skin corrosion/irritation	Moderate skin irritant
Serious eye damage/irritation	Serious to moderate eye irritant
Sensitization (allergic reactions)	Skin sensitizer based on animal studies on the epoxy components
Carcinogenicity (risk of cancer)	<p>The carbon black [1333-86-4] is possibly carcinogenic by airborne routes of exposures under WHMIS.</p> <p>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.</p> <p>Carbon Black [1333-86-4]</p> <p>IARC Group 2B: Possibly carcinogenic to humans</p> <p>ACGIH A4: Not classified as a human carcinogen</p> <p>CA Prop 65: Listed as a carcinogen (airborne, as unbound particles of respirable size)</p> <p>NTP: Not listed</p>
Mutagenicity (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
Reproductive Toxicity (risk to sex functions)	Based on available data, the classification criteria are not met.
Teratogenicity (risk of fetus malformation)	Based on available data, the classification criteria are not met.
STOT-single exposure	Based on available data, the classification criteria are not met.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met. There is no category 1 components, and the kinematic viscosity is $>20.5 \text{ mm}^2/\text{s}$ at 40 °C.

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART A**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# 25068-38-6 and 25085-99-8 have an average molecular weight of less than 700 and 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 and alkyl glycidyl ether are 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 available

Bioaccumulation

Not available

Section 13: Disposal Information

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

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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 liters and under

Limited Quantity



Sizes greater than 5 liters

UN number: UN3082

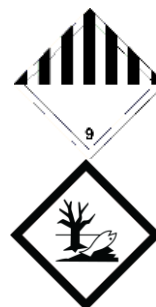
Shipping Name:

ENVIRONMENTALLY HAZARDOUS
 SUBSTANCE, LIQUID, N.O.S.
 (Reaction product: bisphenol-A-
 (epichlorhydrin))

Class: 9

Packing Group: III

Marine Pollutant: Yes



Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes 5 liters and under

Limited Quantity



Sizes greater than 5 liters

UN number: UN3082

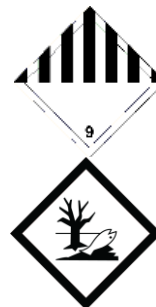
Shipping Name:

ENVIRONMENTALLY HAZARDOUS
 SUBSTANCE, LIQUID, N.O.S.
 (Reaction product: bisphenol-A-
 (epichlorhydrin))

Class: 9

Packing Group: III

Marine Pollutant: Yes


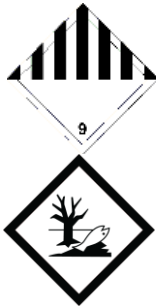


Excepted Quantity E1 ≤30 mL

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Sea

Refer to IMDG regulations.	
<p>Sizes 5 liters and under</p> <p>Limited Quantity</p> 	<p>Sizes greater than 5 liters</p> <p>UN number: UN3082 Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Reaction product: bisphenol-A- (epichlorhydrin)) Class: 9 Packing Group: III Marine Pollutant: Yes</p> 

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.

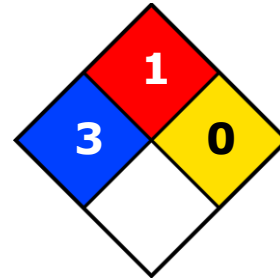
Industry and Science Canada

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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BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART A**USA****Other Classifications****HMIS® RATING**

HEALTH:	* 3
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.

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART A**Section 16: Other Information**

SDS Prepared by	Michel Hachey
Date of Review	28 October 2016
Supersedes	25 February 2016
Reason for Changes:	Revisions to Section 14.

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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Quality System Certified to ISO 9001:2008

SAI Global File #004008
Burlington, Ontario, Canada

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART A

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.

Email: support@mgchemicals.com

Mailing Addresses *Manufacturing & Support*
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V4N 4E7

Disclaimer This material safety data sheet is provided as an information resource only. *M.G. Chemicals, Ltd.* believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to query and verify any information seeming suspect where doubt on the validity may exist. The buyer assumes all responsibility of using and handling the product in accordance with local, regional, national, and international regulations.

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B

Safety Data Sheet





Section 1: Identification**Product Identifier and Other Means of Identification****Product Name:** Black Flexible Epoxy Encapsulating and Potting Compound (Part B)**SDS Code:** 832FX-Part B**Related Part #** 832FX-450ML, 832FX-1.7L, 832FX-7.4L, 832FX-40L**Recommended Use and Restriction on Use****Use:** Epoxy hardener for use with resins**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
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**WEB** www.mgchemicals.com**☎** +1-905-331-1396**FAX** +1-905-331-2682**E-MAIL** info@mgchemicals.com**E-MAIL** (Competent Person): 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

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B
Section 2: Hazard(s) Identification
Classification of the Chemical Material
GHS Categories

Criteria		Category	Signal Word	Pictograms
Serious Eye Damage		1	Danger	Corrosion
Skin Corrosion		1	Danger	Corrosion
Sensitization	Skin sensitizer	1	Warning	Exclamation
Acute Toxicity	Oral	4	Warning	Exclamation
Specific Target Organ Toxicity	Repeated Exposure	2	Warning	Health
Environmental Hazard	Chronic Aqua. Tox.	1	Warning	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

Signal Word	DANGER
Pictograms	Hazard Statements
	H314: Causes severe skin burns and eye damage
	H317: May cause an allergic skin reaction H302: Harmful if swallowed
	H373: May cause damage to liver and immune system through prolonged or repeated exposure
	H410: Very toxic to aquatic life with long lasting effects

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BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B

Continued...

Prevention	Precautionary Statements
P102	Keep out of reach of children.
P260	Do not breathe fumes/mist/vapors.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
Response	Precautionary Statements
P314	Get medical advice/attention if you feel unwell.
P305 + P351 + P338, P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P303 + P361 + P353, P310	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor
P363	Wash contaminated clothing before reuse.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P301 + P330 + P331, P310	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.
P304 + P340, P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P391	Collect spillage.
Storage	Precautionary Statements
P405	Store locked up.
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

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B
Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
9046-10-0	polyoxypropylene diamine	59%
61788-44-1	phenol, styrenated	20%
61788-46-3	amines, coco alkyl	9%
25620-58-0	trimethylhexamethylenediamine	9%
90-72-2	2,4,6-tris(dimethylaminomethyl)phenol	2%

Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
IF IN EYES	P305 + P351 + P338, P310
Immediate Symptoms	<i>redness, severe irritation, pain, burns</i>
Response	Rinse cautiously with water for 30 minutes or more. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
IF ON SKIN (or hair)	P303 + P361+ P353, P310, P363, P333 + P313
Immediate or Delayed Symptoms	<i>redness, irritation, rash (allergic contact dermatitis), pain, chemical burns, blistering</i>
Response	Take off immediately all contaminated clothing. Wash with plenty of water [shower]. Immediately call a POISON CENTRE/doctor. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.
IF SWALLOWED	P301 + P330 + P331, P310
Immediate Symptoms	<i>irritation, abdominal pain, nausea, vomiting, burns to the digestive tract</i>
Response	Rinse mouth. Do not induce vomiting. Immediately call a POISON CENTER/doctor.

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BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B*Continued...*

IF INHALED	P304 + P340, P310
Immediate Symptoms	<i>cough, irritation of the respiratory track, burning sensation</i>
Delayed Symptoms	<i>asthma, difficulty breathing</i>
Response	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

Advice to Physicians

In case of exposure to nitrogen oxides (NO_x) combustion products during a fire, the symptoms may be delayed. For significant exposures, the exposed person should be kept under medical surveillance for 48 hours.

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.
Specific Hazards	Not flammable or combustible, but burns if involved in a fire. Produces irritating and toxic fumes in fires or in contact with hot surfaces. Toxic for aquatic environment: Prevent fire-fighting wash from entering waterway or sewer system.
Combustion Products	Produces carbon oxides (CO, CO ₂) and nitrogen oxides (NO _x).
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	Use personal protection recommended in Section 8.
Precautions for Response	Do not breathe fumes/mist/vapors.
Environmental Precautions	Avoid releasing to the environment. Prevent spill from entering drains and waterways. Do not flush to sewer.
Containment Methods	Contain with inert absorbent (such as soil, sand, vermiculite).

Section continued on the next page

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B

Cleaning Methods	Collect liquid in a sealable container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wipe residue with a paper towel wetted with a suitable organic solvent such as alcohol or ethyl lactate, and place dirty towels in container. Wash spill area with soap and water to remove the last traces of residue.
Disposal Methods	Dispose spill waste according to Section 13.

Section 7: Handling and Storage

Prevention	Keep out of reach of children. Do not breathe fumes/mist/vapors. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink, or smoke when using this product. Avoid release to the environment.
Handling	Wear protective gloves/protective clothing/eye protection/face protection. Wash contaminated clothing before reuse. Wash hands thoroughly after handling. Collect spillage.
Storage	Store locked up.

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

This product contains no substances with occupational exposure limits.

Engineering Controls

Ventilation	Keep airborne concentrations below the occupational exposure limits (OEL). Due to low vapor pressure of the product, general ventilation should be adequate for normal use. If the product is heated at high temperatures or worker is allergic, use local ventilation and consider using a full mask with organic vapor cartridges.
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Section continued on the next page

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B**Personal Protective Equipment****Eye protection**

Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Use safety glasses with lateral protection (side shields).

Skin Protection

For likely contacts, use of protective butyl rubber, neoprene, 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.

If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.

RECOMMENDATION: Consult your local safety supply store to ensure your respirator has a NIOSH (U.S.) approved 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. 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.

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B
Section 9: Physical and Chemical Properties

Physical State	Liquid	Lower Flammability Limit	Not available
Appearance	Clear, amber	Upper Flammability Limit	Not available
Odor	Ammonia-like	Vapor Pressure @20 °C^{b)}	0.02 hPa [0.02 mmHg]
Odor Threshold	Not available	Vapor Density	Not available
pH	Not available	Specific Gravity @25 °C	0.98
Freezing/Melting Point	Not available	Solubility in Water	Slightly soluble
Boiling Point^{a)}	>230 °C [>446 °F]	Partition Coefficient	Not available
Flash Point^{b)}	>104 °C [>219 °F]	Auto-ignition Temperature	Not available
Evaporation Rate	Not available	Decomposition Temperature	Not available
Flammability (solid, gas)	Not available	Viscosity @25 °C	165 cP

a) Component with the lowest closed cup value—2,4,6-tris(dimethylaminomethyl)phenol

b) Literature value for trimethylhexamethylenediamine

Section 10: Stability and Reactivity

Reactivity	Reacts exothermically with epoxides.
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Avoid excessive heat and incompatible substances. Do not use in a way that forms a mist or aerosolize the product.
Incompatibilities	Strong oxidizing agents, strong acids

Section continued on the next page

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B

- Polymerization** Will not occur
- Decomposition** Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

Section 11: Toxicological Information
Routes of Exposure

Eye Contact, Skin Contact, Inhalation, and Ingestion

Symptoms Summary

- Eyes** May cause redness, severe eye irritation, pain, or burns.
- Skin** May cause redness, serious skin irritation, allergic contact dermatitis, pain, chemical burns, or blistering.
- Inhalation** Inhalation of vapors or mist may cause irritation to the nose, throat and lung (upper respiratory tract).
- Ingestion** May cause irritation, abdominal pain, nausea, vomiting, burns to the digestive tract. May cause allergic reactions (see inhalation symptoms).
- Chronic** Prolonged and repeated exposure to uncured epoxy hardener may lead to skin sensitization.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
polyoxypropylene diamine	480 mg/kg ^{a)} Rat	2 090 mg/kg ^{a)} Rabbit	Not established
phenol, styrenated	3 700 mg/kg Rat ^{a)}	>5 010 mg/kg Rabbit ^{a)}	>4.9 mg/L (mist) Rat ^{a)}
amines, coco alkyl	1 300 mg/kg Rat ^{a)}	>2 000 mg/kg Rat ^{a)}	Not available
trimethylhexamethylenediamine	Not available	Not available	Not available
2,4,6-tris(dimethylaminomethyl) phenol	Not available	Not available	Not available

Note: Toxicity data from the RTECS² and ECHA were consulted. The data from supplier (M)SDS were also consulted.

a) Supplier MSDS

Section continued on the next page

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B**Other Toxicological Effects**

Skin corrosion/irritation	The hardener system causes skin burns.
Serious eye damage/irritation	The hardener system causes severe eye damage.
Respiratory and skin sensitization (allergic reactions)	Trimethylhexamethylenediamine and 2,4,6-tris(dimethylaminomethyl)phenol may cause skin sensitization according to animal studies.
Carcinogenicity (risk of cancer)	None of the ingredients are classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.
Mutagenicity (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
Reproductive Toxicity (risk to sex functions)	Based on available data, the classification criteria are not met.
Teratogenicity (risk of fetus malformation)	Based on available data, the classification criteria are not met.
STOT-single exposure	Based on available data, the classification criteria are not met.
STOT-repeated exposure	Long term or repeated exposure to "amines, coco alkyl" are believed to lead to liver damage and immune system deficiencies.
Aspiration hazard	Based on available data, the classification criteria are not met. Contains <10% category 1 components, and the kinematic viscosity is >20.5 mm ² /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 coco alkyl amines is classified as a chronic category 1 environmental toxicant with an M-factor of 10.

The phenol, styrenated compound is classified as chronic category 2 environmental toxicants.

The trimethylhexamethylenediamine and 2,4,6-tris(dimethylaminomethyl)phenol compounds are classified as chronic category 3 environmental toxicants.

Section continued on the next page

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B
Acute Ecotoxicity

Category 1

Very toxic to aquatic life

Chronic Ecotoxicity

Category 1

Very toxic to aquatic life with long lasting effects

Avoid release to the environment. Collect spillage.

Biodegradability

Not readily biodegradable

Bioaccumulation

Not available

Other Effects

Not available

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 1 L and under

Limited Quantity


Sizes greater than 1 L

UN number: UN2735

Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S.

(trimethylhexamethylenediamines, polyoxypropylene diamine)

Class: 8

Packing Group: II

Marine Pollutant: Yes

Section continued on the next page

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B
Air
Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes 0.5 L and under

Limited Quantity

Excepted Quantity
E2 ≤30 mL

Sizes greater than 0.5 L up to 1 L

UN number: UN2735

Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S.

(trimethylhexamethylenediamines, polyoxypropylene diamine)

Class: 8

Packing Group: II

Marine Pollutant: Yes

Sea
Refer to IMDG regulations.

Sizes 1 L and under

Limited Quantity


Sizes greater than 1 L

UN number: UN2735

Shipping Name: AMINES, LIQUID, CORROSIVE, N.O.S.

(trimethylhexamethylenediamines, polyoxypropylene diamine)

Class: 8

Packing Group: II

Marine Pollutant: Yes


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

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B
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

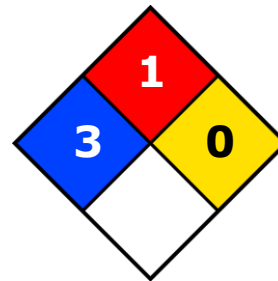
MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

Health Canada

Products produced by MG Chemicals intended for retail display conform to the Canadian Consumer Labeling Regulations.

USA
Other Classifications
HMIS® RATING

HEALTH:	* 3
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 that 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.

Section continued on the next page

BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B

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.

Section 16: Other Information

SDS Prepared by	Michel Hachey
Date of Revision	25 February 2016
Supersedes	Not applicable
Reason for Changes:	Not applicable

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®)

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BLACK FLEXIBLE EPOXY ENCAPSULATING AND POTTING COMPOUND 832FX-PART B**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

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.

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