

834HTC- B

(PART B)

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Identifier: 834HTC-B**Other Means of Identification:** High Thermal Conductivity Epoxy (Part B)**Related Part #** 834HTC-900ML, 834HTC-4.25L

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

ManufacturerMG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADAMG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA**TEL** +1-800-340-0772**TEL** +1-905-331-1396**FAX** +1-800-340-0773**FAX** +1-905-331-2682**E-MAIL** support@mgchemicals.com**E-MAIL** info@mgchemicals.com**WEB** www.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 Verisk 3E at **+1-866-519-4752** or **+1-760-476-3962**
(Service access code: 335388)**For emergencies involving the transport of dangerous goods;** 24/7 service
CANADA—Call CANUTEC collect at **+1-613-996-6666** or ***666** on cellular phones

834HTC- B
(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
Acute Toxicity	Dermal	3	Danger	Skull and crossbones
Acute Toxicity	Oral	4	Warning	Exclamation
Acute Toxicity	Inhalation	4	Warning	Exclamation
Sensitization	Skin	1	Warning	Exclamation
Specific Target Organ Toxicity	Repeated Exposure	2	Warning	Health
Hazardous to the Aquatic Environment	Chronic	3	None	None


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
	H311: Toxic in contact with skin
	H302: Harmful if swallowed H332: Harmful if inhaled H317: May cause an allergic skin reaction

Section continued on the next page

834HTC- B
(PART B)
Continued...

Pictograms	Hazard Statements
	H373: May cause damage to liver, adrenal gland, heart, and blood through prolonged or repeated exposure
No symbol Mandated	H412: Harmful to aquatic life with long lasting effects
Prevention	Precautionary Statements
P102 P260 P271 P280 P264 P270 P272 P273	Keep out of reach of children. Do not breathe fumes or vapors. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, eye protection, and face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment.
Response	Precautionary Statements
P310 P361 + P364 P333 + P313 P305 + P351 + P338 P304 + P340 P301 + P312, P330 + P331 P391	For all routes of exposure: Immediately call a POISON CENTER or doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting. Collect spillage.

Section continued on the next page

834HTC- B
(PART B)

Continued...

Storage	Precautionary Statements
P405	Store locked up.
Disposal	Precautionary Statements
P501	Dispose of contents in accordance to local, regional, national, and international regulations.

Hazards Not Otherwise Classified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Scleroderma	Long term or repeated exposure may lead to an autoimmune disease that results in hardening of the skin and can affect the internal organs.	None	None

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	64%
6864-37-5	2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	24%

Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
IF INHALED	P304 + P340, P310
Immediate Symptoms	<i>irritation, cough, sore throat, burning sensation, labored breathing, shortness of breath</i>
Response	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.

Section continued on the next page

834HTC- B
(PART B)
Continued...

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 or doctor.
IF ON SKIN (or hair)	P361 + P364, P310, P333 + P313
Immediate Symptoms	<i>redness, irritation, rash (allergic contact dermatitis), pain, chemical burns, blistering</i>
Response	Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. Immediately call a POISON CENTRE or doctor. If skin irritation or rash occurs: Get medical advice or attention.
IF SWALLOWED	P301 + P312, P310, P330 + P331
Immediate Symptoms	<i>irritation, abdominal pain, burning sensation, shock or collapse</i>
Response	Immediately call a POISON CENTER or doctor. Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use extinguishing media suitable for surrounding materials.
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), nitrogen oxides (NO _x), nitric acid, ammonia, and other toxic fumes.
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

834HTC- B**(PART B)****Section 6: Accidental Release Measures**

Personal Protection	Use personal protection recommended in Section 8.
Precautions for Response	Do not breathe fumes or 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).
Cleaning Methods	Collect liquid in a sealable container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wipe off residues with paper towels and place the used towels in the waste 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 or vapors. Use only outdoors or in a well-ventilated area. 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, and face protection. Wash contaminated clothing before reuse. Wash hands thoroughly after handling. Collect spillage.
Storage	Store locked up.

834HTC- B**(PART B)****Section 8: Exposure Controls/Personal Protection****Substances with Occupational Exposure Limit Values**

Contains no substances with occupational exposure limits.

Note: The ACGIH¹, OSHA, and Canadian provinces exposure limits were consulted. Limits from by RTECS database² and data from suppliers' SDS were also consulted.

Engineering Controls**Ventilation**

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.

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 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.

Section continued on the next page

834HTC- B**(PART B)****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	Clear	Upper Flammability Limit	Not available
Odor	Not available	Vapor Pressure @20 °C	Not available
Odor Threshold	Not available	Vapor Density	Not available
pH	Not available	Relative Density @25 °C	0.94
Freezing/Melting Point	Not available	Solubility in Water	Insoluble
Initial Boiling Point ^{a)}	≥ 100 °C [≥ 212 °F]	Partition Coefficient n-octanol/water	Not available
Flash Point	≥ 116 °C [≥ 241 °F]	Auto-ignition Temperature	Not available
Evaporation Rate	Not available	Decomposition Temperature	Not available
Flammability	Non Flammable	Viscosity @25 °C	24 cP

a) Component with the lowest literature value 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)

834HTC- B**(PART B)****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	Sodium hypochlorite, organic acids, mineral acids, copper, aluminum, zinc, tin alloys, peroxides, strong oxidizing agents
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

Section 11: Toxicological Information**Summary of Effects and Symptoms by Routes of Exposure**

Eyes	May cause redness, severe eye irritation, pain, and/or burns.
Skin	May cause redness, serious skin irritation, rash (allergic contact dermatitis), pain, chemical burns, or blistering.
Inhalation	Inhalation of vapors may cause irritation, coughing, sore throat, burning sensation, labored breathing, shortness of breath.
Ingestion	May cause irritation, abdominal pain, burning sensation, shock or collapse. May cause allergic reactions (see inhalation symptoms).
Chronic	Prolonged and repeated exposure to uncured epoxy hardener may lead to skin sensitization.

Section continued on the next page

834HTC- B
(PART B)
Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
3-aminomethyl-3,5,5-trimethylcyclohexylamine	1 030 mg/kg Rat	Not available	Not available
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)	320 mg/kg Rat	200 mg/kg Rabbit	0.41 mg/L Rat 4 h (mist)

Note: Toxicity data from the RTECS² and ECHA were consulted. The data from supplier SDSs' were also consulted.

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)	The 3-aminomethyl-3,5,5-trimethylcyclohexylamine component 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 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) can cause damage to liver, adrenal gland, heart, and blood.
Aspiration hazard	Based on available data, the classification criteria are not met. Mixture does not contain category 1 components, and the kinematic viscosity is >20.5 mm ² /s at 40 °C.

834HTC- B**(PART B)****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 3-aminomethyl-3,5,5-trimethylcyclohexylamine (CAS# 2855-13-2) component is an acute category 3 environmental toxicant with minimal LC50 of 110 mg/L for *Leuciscus idus* (Golden orfe); EC50 17.4 mg/L 48 h *Daphnia magna* (water flea), EC50 37 mg/L 72 h *Desmodesmus subspicatus* (green algae).

The 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine), tetraethylenepentamine, naphtha, petroleum, heavy alkylate, phenol compounds are classified as chronic category 2 environmental toxicants.

Acute Ecotoxicity

Category 3

Harmful to aquatic life

Chronic Ecotoxicity

Category 3

Harmful 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.

834HTC- B

(PART B)

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

*Part B of 834HTC-900ML and
834HTC-4.25L kit*

Limited Quantity



Sizes greater than 1 L

UN number: UN2922

Shipping Name: CORROSIVE,
LIQUID, TOXIC, N.O.S. (3-
aminomethyl-3,5,5-
trimethylcyclohexylamine, 2,2'-
dimethyl-4,4'-
methylenebis(cyclohexylamine))

Class: 8, 6.1

Packing Group: II

Marine Pollutant: No



Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes 0.5 L and under

Part B of 834HTC-900ML kit

Limited Quantity



Sizes greater than 0.5 L up to 1 L

Part B of 834HTC-4.25L kit

UN number: UN2922

Shipping Name: CORROSIVE,
LIQUID, TOXIC, N.O.S. (3-
aminomethyl-3,5,5-
trimethylcyclohexylamine, 2,2'-
dimethyl-4,4'-
methylenebis(cyclohexylamine))

Class: 8, 6.1

Packing Group: II

Marine Pollutant: No





Section continued on the next page

834HTC- B

(PART B)

Sea

Refer to IMDG regulations.	
<p>Sizes 1 L and under <i>Part B of 832HTC-900ML and 834HTC-4.25L kit</i> Limited Quantity</p> 	<p>Sizes greater than 1 L</p> <p>UN number: UN2922 Shipping Name: CORROSIVE, LIQUID, TOXIC, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine, 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)) Class: 8, 6.1 Packing Group: II Marine Pollutant: No</p> 

Note 1: Shipper must be appropriately trained and certified before involvement with the transport of dangerous goods.

Note 2: Unless indicated otherwise, the size limits provided refer to container capacities, not the combination pack gross quantity nor the total kit quantity.

Section 15: Regulatory Information

Canada

Domestic Substance List (DSL)/Non-Domestic Substance Lists (NDSL)

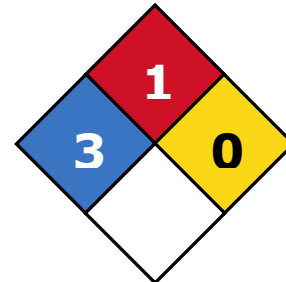
All hazardous ingredients are listed on the DSL/NDSL.

Hazardous Products Act (R.S.C., 1985, c. H-3)

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

834HTC- B**(PART B)****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 ingredients 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.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, USA).

This product does not contain any substances known to be listed in California.

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

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP 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	MG Chemicals' Regulatory Department
Date of Review	02 March 2020
Supersedes	20 November 2019
Reason for Changes:	Update to the emergency phone number information.

Reference

- 1) ACGIH 2017 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 (2017).
- 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

Section continued on the next page

834HTC- B**(PART B)**

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*
1210 Corporate Drive
Burlington, Ontario, Canada
L7L 5R6

Head Office
9347-193rd Street
Surrey, British Columbia, Canada
V4N 4E7

Disclaimer This 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.