

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, 834HTC-45L, 834HTC-108L

### 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](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 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**

<b>Signal Word</b>	<b>DANGER</b>
<b>Pictograms</b>	<b>Hazard Statements</b>
	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...*

<b>Pictograms</b>	<b>Hazard Statements</b>
	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
<b>Prevention</b>	<b>Precautionary Statements</b>
P102	Keep out of reach of children.
P260	Do not breathe fumes or vapors.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection, and 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.
<b>Response</b>	<b>Precautionary Statements</b>
P310	For all routes of exposure: Immediately call a POISON CENTER or doctor.
P361 + P364	IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water.
P333 + P313	If skin irritation or rash occurs: Get medical advice or attention.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P312, P330 + P331	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting.
P391	Collect spillage.

*Section continued on the next page*

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

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

**Hazards Not Otherwise Classified**

<b>Other Criteria</b>	<b>Hazard Statements/Precautionary Statement</b>	<b>Signal Word</b>	<b>Pictograms</b>
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**

<b>CAS #</b>	<b>Chemical Name</b>	<b>%(weight)</b>
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>
<b>IF INHALED</b>	P304 + P340, P310
<b>Immediate Symptoms</b>	<i>irritation, cough, sore throat, burning sensation, labored breathing, shortness of breath</i>
<b>Response</b>	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...*

<b>IF IN EYES</b>	P305 + P351 + P338, P310
<b>Immediate Symptoms</b>	<i>redness, severe irritation, pain, burns</i>
<b>Response</b>	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.
<b>IF ON SKIN (or hair)</b>	P361 + P364, P310, P333 + P313
<b>Immediate Symptoms</b>	<i>redness, irritation, rash (allergic contact dermatitis), pain, chemical burns, blistering</i>
<b>Response</b>	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.
<b>IF SWALLOWED</b>	P301 + P312, P310, P330 + P331
<b>Immediate Symptoms</b>	<i>irritation, abdominal pain, burning sensation, shock or collapse</i>
<b>Response</b>	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**

<b>Extinguishing Media</b>	In case of fire: Use extinguishing media suitable for surrounding materials.
<b>Specific Hazards</b>	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.
<b>Combustion Products</b>	Produces carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO <sub>x</sub> ), nitric acid, ammonia, and other toxic fumes.
<b>Fire-Fighter</b>	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

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

<b>Personal Protection</b>	Use personal protection recommended in Section 8.
<b>Precautions for Response</b>	Do not breathe fumes or vapors.
<b>Environmental Precautions</b>	Avoid releasing to the environment. Prevent spill from entering drains and waterways. Do not flush to sewer.
<b>Containment Methods</b>	Contain with inert absorbent (such as soil, sand, vermiculite).
<b>Cleaning Methods</b>	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.
<b>Disposal Methods</b>	Dispose spill waste according to Section 13.

**Section 7: Handling and Storage**

<b>Prevention</b>	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.
<b>Handling</b>	Wear protective gloves, protective clothing, eye protection, and face protection. Wash contaminated clothing before reuse. Wash hands thoroughly after handling. Collect spillage.
<b>Storage</b>	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 ACGIH<sup>1</sup>, OSHA, and Canadian provinces exposure limits were consulted. Limits 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**

<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>	Not available	<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>Relative Density @25 °C</b>	0.94
<b>Freezing/Melting Point</b>	Not available	<b>Solubility in Water</b>	Insoluble
<b>Initial Boiling Point</b> <sup>a)</sup>	≥100 °C [≥212 °F]	<b>Partition Coefficient n-octanol/water</b>	Not available
<b>Flash Point</b>	≥116 °C [≥241 °F]	<b>Auto-ignition Temperature</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Decomposition Temperature</b>	Not available
<b>Flammability</b>	Non Flammable	<b>Viscosity @25 °C</b>	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**

<b>Reactivity</b>	Reacts exothermically with epoxides.
<b>Chemical Stability</b>	Chemically stable at normal temperatures and pressures
<b>Conditions to Avoid</b>	Avoid excessive heat and incompatible substances. Do not use in a way that forms a mist or aerosolize the product.
<b>Incompatibilities</b>	Sodium hypochlorite, organic acids, mineral acids, copper, aluminum, zinc, tin alloys, peroxides, strong oxidizing agents
<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****Summary of Effects and Symptoms by Routes of Exposure**

<b>Eyes</b>	May cause redness, severe eye irritation, pain, and/or burns.
<b>Skin</b>	May cause redness, serious skin irritation, rash (allergic contact dermatitis), pain, chemical burns, or blistering.
<b>Inhalation</b>	Inhalation of vapors may cause irritation, coughing, sore throat, burning sensation, labored breathing, shortness of breath.
<b>Ingestion</b>	May cause irritation, abdominal pain, burning sensation, shock or collapse. May cause allergic reactions (see inhalation symptoms).
<b>Chronic</b>	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)**

<b>Chemical Name</b>	<b>LD50 oral</b>	<b>LD50 dermal</b>	<b>LC50 inhalation</b>
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 ECHA were consulted. The data from supplier SDSs' were also consulted.

**Other Toxicological Effects**

<b>Skin corrosion/irritation</b>	The hardener system causes skin burns.
<b>Serious eye damage/irritation</b>	The hardener system causes severe eye damage.
<b>Respiratory and skin sensitization</b> (allergic reactions)	The 3-aminomethyl-3,5,5-trimethylcyclohexylamine component may cause skin sensitization according to animal studies.
<b>Carcinogenicity</b> (risk of cancer)	None of the ingredients are 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.
<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>	Long term or repeated exposure to 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine) can cause damage to liver, adrenal gland, heart, and blood.
<b>Aspiration hazard</b>	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 <sup>2</sup> /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,  
834HTC-4.25L*  
**Limited Quantity**



Sizes greater than 1 L  
*Part B of 834HTC-45L, 834HTC-108L kits*

**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, 834HTC-45L, 834HTC-108L  
kits*

**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.**

Sizes 1 L and under  
*Part B of 832HTC-900ML,  
834HTC-4.25L*

**Limited Quantity**


Sizes greater than 1 L  
*Part B of 834HTC-45L, 834HTC-108L kits*

**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



**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)**

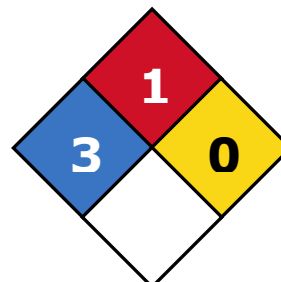
All hazardous ingredients are listed on the DSL/NDSL.

**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<sup>®</sup> RATING**

<b>HEALTH:</b>	<b>* 3</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 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.

**834HTC- B****(PART B)****Section 16: Other Information**

**SDS Prepared by** MG Chemicals' Regulatory Department  
**Date of Review** 29 January 2024  
**Supersedes** 15 August 2023  
**Reason for Changes:** Minor modifications to section 14.

**Reference**

1) ACGIH 2024 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 (2024).

**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](http://www.mgchemicals.com).

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

**Mailing Addresses** *Manufacturing & Support*  
1210 Corporate Drive  
Burlington, Ontario, Canada  
L7L 5R6

**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.