



Kit Revision Date: 07 June 2023

## 8329HTC THERMALLY CONDUCTIVE STRUCTURAL EPOXY ADHESIVE KIT

### MG Chemicals Multipart Product Kit

This product is a kit made up of multiple parts. Each part is an independently packaged chemical component and has independent hazard assessments.

#### **Kit Content**

<i>Part</i>	<i>Product Name</i>	<i>Product Use</i>
A	8329HTC-A	Epoxy resin for use with hardeners
B	8329HTC-B	Epoxy hardener for uses with resins

*Safety Data Sheets for each part listed above follow this cover sheet.*

#### **Transportation Instruction**

Before offering this product kit for transport, read Section 14 for all parts listed above.

8329HTC

(PART A)

# Safety Data Sheet

## Section 1: Identification

### Product Identifier and Other Means of Identification

**Product Identifier:** 8329HTC-A**Other Means of Identification:** Thermally Conductive Structural Epoxy Adhesive (Part A)**Related Part #** 8329HTC-50ML, 8329HTC-400ML

### Recommended Use and Restriction on Use

**Use:** Epoxy resin for use with hardeners**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**TEL** +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)**TEL** +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

**8329HTC**
**(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	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**

<b>Signal Word</b>	<b>WARNING</b>
<b>Pictograms</b>	<b>Hazard Statements</b>
	H317: May cause an allergic skin reaction H319: Causes serious eye irritation H315: Causes skin irritation
	H410: Very toxic to aquatic life with long lasting effects

*Section continued on the next page*

**8329HTC**
**(PART A)**
*Continued...*

<b>Prevention</b>	<b>Precautionary Statements</b>
P102	Keep out of reach of children.
P261	Avoid breathing fumes and vapors.
P280	Wear protective gloves and eye 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.
<b>Response</b>	<b>Precautionary Statements</b>
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 or attention.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P333 + P313	If skin irritation or rash occurs: Get medical advice or attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
<b>Storage</b>	<b>Precautionary Statements</b>
Not applicable	Not applicable
<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>
None	None	None	None

**8329HTC**
**(PART A)**
**Section 3: Composition/Information on Ingredients**

<b>CAS #</b>	<b>Chemical Name</b>	<b>%(weight)*</b>
24304-00-5	aluminum nitride	30-50%
25068-38-6	bisphenol-A-(epichlorhydrin); epoxy resin	25-45%
7429-90-5	aluminum powder (pyrophoric)	25-45%
112945-52-5	silica, amorphous, fumed, crystal-free	1-5%

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**Section 4: First-Aid Measures**

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

8329HTC

**(PART A)****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 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.

**Section 6: Accidental Release Measures**

<b>Personal Protection</b>	See personal protection recommendations in Section 8.
<b>Precautions for Response</b>	Avoid breathing fumes and 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>	Not applicable—not readily flowable
<b>Cleaning Methods</b>	Scoop the spill into the chemical-resistant container. Wipe off residues with paper towels and place the used towels in the waste container. Use soap and water to remove the last traces of residue.
<b>Disposal Methods</b>	Dispose of spill waste according to Section 13.

**8329HTC**
**(PART A)**
**Section 7: Handling and Storage**

<b>Prevention</b>	Keep out of reach of children. Avoid breathing fumes and vapors. Avoid release to the environment.
<b>Handling</b>	Wear protective gloves and 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.
<b>Storage</b>	DO NOT FREEZE. Store in a clean and dry area between 5 to 35 °C.

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

<b>Chemical Name</b>	<b>Country or Vendor</b>	<b>Long Term Exposure Limits (PEL)</b>	<b>Short Term Exposure Limits (STEL)</b>
aluminum metal and insoluble compounds	ACGIH	1 mg/m <sup>3</sup>	Not established
	U.S.A. OSHA PEL	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
	Canada AB	10 mg/m <sup>3</sup>	Not established
	Canada BC	Not established	Not established
	Canada ON	1 mg/m <sup>3</sup>	Not established
	Canada QC	5 mg/m <sup>3</sup>	Not established

*Note:* The ACGIH<sup>1</sup>, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from supplier SDSs were also consulted. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

**8329HTC****(PART A)****Engineering Controls****Ventilation**

General ventilation is adequate for normal use; keep overall exposure as low as possible.

Aluminum metal and insoluble compounds are bound in the matrix and are not available as a respiration hazard under normal conditions or foreseeable emergency conditions.

Due to low product vapor pressures, general ventilation should be adequate for normal use. 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.

**Personal Protective Equipment****Eye protection**

Wear appropriate protective eyeglasses or chemical safety goggles.

**RECOMMENDATION:** Ensure that glasses have side shields for lateral protection (side shields).

**Skin Protection**

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

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

**Respiratory Protection**

For over-exposures up to 10 x OEL of vapors, fumes and dust, wear respirator such as a half-mask respirator with organic vapor cartridges with a particulate filter.

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 or half 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.

**General Hygiene Considerations**

Wash hands thoroughly with water and soap after handling.



**8329HTC**
**(PART A)**
**Section 9: Physical and Chemical Properties**

<b>Physical State</b>	Paste, solid	<b>Lower Flammability Limit</b>	Not available
<b>Appearance</b>	Noir	<b>Upper Flammability Limit</b>	Not available
<b>Odor</b>	Aromatic	<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>	>1.8
<b>Freezing/Melting Point</b>	Not available	<b>Solubility in Water</b>	Negligible
<b>Initial Boiling Point</b>	Not available	<b>Partition Coefficient n-octanol/water</b>	Not available
<b>Flash Point</b> <sup>a)</sup>	200 °C [392 °F]	<b>Auto-ignition Temperature</b> <sup>b)</sup>	Not available
<b>Evaporation Rate</b>	Not available	<b>Decomposition Temperature</b>	Not available
<b>Flammability</b>	Non flammable	<b>Viscosity @25 °C</b>	Not available

a) value based on supplier SDS

**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>	Ignition sources, open flames, and incompatible substances
<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.

**8329HTC**
**(PART A)**
**Section 11: Toxicological Information**
**Summary of Effects and Symptoms by Routes of Exposure**

<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>	Low toxicity: may cause irritation.
<b>Chronic</b>	Prolonged and repeated exposure may lead to skin sensitization.

**Acute Toxicity (Lethal Exposure Concentrations)**

<b>Chemical Name</b>	<b>LD50 oral</b>	<b>LD50 dermal</b>	<b>LC50 inhalation</b>
aluminum nitride	>2 000 mg/kg Rat	Not available	Not available
bisphenol-A-(epichlorhydrin); epoxy resin	>2 000 mg/kg Rat	>2 000 mg/kg Rat	Not available
aluminum powder (pyrophoric)	>5 000 mg/kg Rat	Not available	Not available
silica, amorphous, crystal-free	Not available	Not available	Not available
Mixture ATE	>2 000 mg/kg	>2 000 mg/kg	Not available

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

*Section continued on the next page*

**8329HTC****(PART A)****Other Toxicological Effects**

<b>Skin corrosion/irritation</b>	Based on tests on rabbits, the epoxy resins are skin irritants.
<b>Serious eye damage/irritation</b>	Based on tests on rabbits, the epoxy resins are eye irritant.
<b>Sensitization</b> (allergic reactions)	Based on animal studies on the epoxy resins, this product is a skin sensitizer
<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>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.

**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.

Aluminum nitride is an acute and chronic category 1 (M=1) environmental toxicant with a minimal LC50 96h of 0.57 mg/L for *Oncorhynchus mykiss* (rainbow trout) and a chronic NOEC value of 0.22 ug/L for fishes.

In Europe, similar epoxy resin mixtures with CAS# 25068-38-6 and average molecular weight of less than 700 are generally classified as chronic category 2 marine pollutant due to LC50 96 h of >1 mg/L but ≤10 mg/L.

*Section continued on the next page*

**8329HTC****(PART A)****Acute Ecotoxicity**

See chronic ecotoxicity.

**Chronic Ecotoxicity**

Category 1

Very toxic to aquatic life with long lasting effects

Avoid release to the environment. Collect spillage.

**Biodegradability**

Not available

**Bioaccumulation**

Not available

**Other Effects**

Not available

**Section 13: Disposal Considerations**

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

**8329HTC**

**(PART A)**

**Section 14: Transport Information**

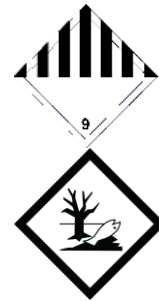
**Ground**

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

TDG: Sizes 5 kg and under  
*Part A of 8329HTC-50ML, 8329HTC-400ML kits*  
**NOT REGULATED** in TDG  
per Special Provisions 99(2)

49 CFR: Sizes greater than 5 kg  
*FOR REFERENCE ONLY*

**UN number:** UN3077  
**Shipping Name:**  
ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, SOLID,N.O.S.  
(Aluminum Nitride)  
**Class:** 9  
**Packing Group:** III  
**Marine Pollutant:** Yes



49 CFR: Sizes 5 kg and under  
*Part A of 8329HTC-50ML, 8329HTC-400ML kits*  
**NOT REGULATED** in 49 CFR  
per exception 171.4 (c)(2)

**Special Provision 99 (2):** These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety.

**171.4 (c) Exceptions:**

(2) Single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other requirements of this subchapter provided the packagings meet the general requirements in §§ 173.24 and 173.24a. This exception does not apply to marine pollutants that are a hazardous waste or a hazardous substance. In the case of marine pollutants also meeting the criteria for inclusion in another hazard class, all provisions of this subchapter relevant to any additional hazards continue to apply.

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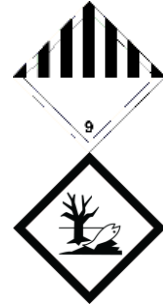
**8329HTC****(PART A)****Air****Refer to ICAO-IATA Dangerous Goods Regulations.**

Sizes 5 kg and under  
*Part A of 8329HTC-50ML, 8329HTC-400ML kits*

**NOT REGULATED**

On air waybill write:  
"Not Restricted, as per  
Special Provisions A197"

Sizes greater than 5 kg  
*FOR REFERENCE ONLY*

**UN number:** UN3077**Shipping Name:**  
ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, SOLID, N.O.S.  
(Aluminum Nitride)**Class:** 9**Packing Group:** III**Marine Pollutant:** Yes

**Special Provision A197:** These substances when transported in single or combination packagings containing net quantity per single or inner packaging of less than 5 L or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of these Regulations provided the packagings meet the general provisions 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

*Section continued on the next page*

**8329HTC**

**(PART A)**

**Sea**

**Refer to IMDG regulations.**

Sizes 5 kg and under  
Part A of 8329HTC-50ML, 8329HTC-400ML kits  
**NOT REGULATED**  
per 2.10.2.7

Sizes greater than 5 kg

**UN number:** UN3077  
**Shipping Name:**  
ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, SOLID, N.O.S.  
(Aluminum Nitride)  
**Class:** 9  
**Packing Group:** III  
**Marine Pollutant:** Yes



**2.10.2.7:** Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provision of this Code relevant to marine pollutants provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. In the case of marine pollutants also meeting the criteria for inclusion in another hazard class, all provisions of this Code relevant to any additional hazards continue to apply.

**Temperature sensitive—Keep between 5 °C and 35 °C.**

**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.

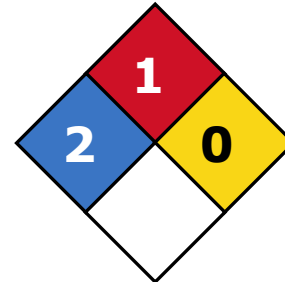
**Hazardous Products Act (R.S.C., 1985, c. H-3)**

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

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**8329HTC****(PART A)****USA****Other Classifications****HMIS® RATING**

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

**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, USA)

This product does not contain any substances on the California Proposition 65 list.

**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.



**8329HTC****(PART A)****Section 16: Other Information**

<b>SDS Prepared by</b>	MG Chemical's Regulatory Department
<b>Date of Review</b>	12 April 2023
<b>Supersedes</b>	Not applicable
<b>Reason for Changes:</b>	First version SDS for 8329htc-part a.

**Reference**

1) ACGIH 2022 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 (2022).

**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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**8329HTC****(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](http://www.mgchemicals.com).

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

Phone: +1-905-331-1396

**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.

8329HTC

(PART B)

# Safety Data Sheet

## Section 1: Identification

### Product Identifier and Other Means of Identification

**Product Identifier:** 8329HTC (Part B)**Other Means of Identification:** Thermally Conductive Structural Epoxy Adhesive (Part B)**Related Part #** 8329HTC-50ML, 8329HTC-400ML

### 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  
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 serviceCANADA—Call CANUTEC collect at **+1-613-996-6666** or **\*666** on cellular phones

**8329HTC**
**(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
Sensitization	Skin	1	Warning	Exclamation
Skin Irritation		2	Warning	Exclamation
Hazardous to the aquatic Environment	Chronic	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**

<b>Signal Word</b>	<b>DANGER</b>
<b>Pictograms</b>	<b>Hazard Statements</b>
	H318: Causes serious eye damage
	H317: May cause an allergic skin reaction H315: Causes skin irritation
	H410: Very toxic to aquatic life with long lasting effects

*Section continued on the next page*

**8329HTC**
**(PART B)**
*Continued...*

<b>Prevention</b>	<b>Precautionary Statements</b>
P102	Keep out of reach of children.
P261	Avoid breathing fumes and vapors.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves and eye protection.
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>
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P303 + P352	IF ON SKIN: Wash with plenty of water or shower.
P333 + P313	If skin irritation or rash occurs: Get medical advice or attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
<b>Storage</b>	<b>Precautionary Statements</b>
Not Applicable	Not Applicable
<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>
None	None	None	None

**8329HTC**
**(PART B)**
**Section 3: Composition/Information on Ingredients**

CAS #	Chemical Name	%(weight)*
24304-00-5	aluminum nitride	30-50%
68082-29-1	fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine	25-45%
7429-90-5	aluminum (fume or dust only)	25-45%
112945-52-5	silica, amorphous, fumed, cryst.-free	1-5%

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

**Section 4: First-Aid Measures**

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
<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</b>	P303 + P352, P333 + P313, P362 + P364
<b>Immediate Symptoms</b>	<i>redness, irritation, rash (allergic contact dermatitis)</i>
<b>Response</b>	Wash with plenty of water or shower. Immediately call a POISON CENTRE or doctor. If skin irritation or rash occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.
<b>IF INHALED</b>	P304 + P340, P310
<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, P310
<b>Immediate Symptoms</b>	<i>irritation, abdominal pain, nausea, vomiting</i>
<b>Response</b>	Rinse mouth. Do not induce vomiting.

**8329HTC****(PART B)****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.  Inhalation of toxic smoke during fire may have delayed effects. Exposed person may need to be put under surveillance for 48 h.  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> ) and nitrogen oxides (NO <sub>x</sub> ).
<b>Fire-Fighter</b>	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

**Section 6: Accidental Release Measures**

<b>Personal Protection</b>	Use personal protection recommended in Section 8.
<b>Precautions for Response</b>	Avoid breathing fumes and vapors. Remove or keep away all sources of extreme heat.
<b>Environmental Precautions</b>	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
<b>Containment Methods</b>	Not applicable—not easily flowable.
<b>Cleaning Methods</b>	Collect liquid in a sealable container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wipe residue with a paper towel, and place dirty towels in 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.

**8329HTC**
**(PART B)**
**Section 7: Handling and Storage**
**Prevention**

Keep out of reach of children.

Avoid breathing fumes and vapors. Avoid contact with skin or eyes.

Contaminated work clothing should not be allowed out of the workplace.

Avoid release to the environment.

**Handling**

Wear protective gloves, protective clothing, eye protection, and face protection. Take off contaminated clothing and wash it 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**

Chemical Name	Country or Vendor	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
aluminum metal and insoluble compounds	ACGIH	1 mg/m <sup>3</sup>	Not established
	U.S.A. OSHA PEL	10 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
	Canada AB	10 mg/m <sup>3</sup>	Not established
	Canada BC	Not established	Not established
	Canada ON	1 mg/m <sup>3</sup>	Not established
	Canada QC	5 mg/m <sup>3</sup>	Not established

*Note:* The ACGIH<sup>1</sup>, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from supplier SDSs were also consulted. Short term exposure limits (STEL) are for 15 min and long-term permissible exposure limits (PEL) for 8 h.

*Section continued on the next page*



**8329HTC****(PART B)****Engineering Controls****Ventilation**

General ventilation is adequate for normal use; keep overall exposure as low as possible.

Aluminum metal and insoluble compounds are bound in the matrix and are not available as a respiration hazard under normal conditions or foreseeable emergency conditions.

Due to low product vapor pressures, general ventilation should be adequate for normal use. 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.

**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 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 vapors, fumes and dust, wear respirator such as a half-mask respirator with organic vapor cartridges with particulate filter.

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.

**General Hygiene Considerations**

Wash hands thoroughly with water and soap after handling.

**8329HTC**
**(PART B)**
**Section 9: Physical and Chemical Properties**

<b>Physical State</b>	Paste, solid	<b>Lower Flammability Limit</b>	Not available
<b>Appearance</b>	Grey	<b>Upper Flammability Limit</b>	Not available
<b>Odor</b>	Amine-Like	<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>	>1.6 g/cm <sup>3</sup>
<b>Freezing/Melting Point</b>	Not available	<b>Solubility in Water</b>	Slightly soluble
<b>Initial Boiling Point</b>	Not available	<b>Partition Coefficient n-octanol/water</b>	Not available
<b>Flash Point</b> <sup>a)</sup>	>180 °C [>356 °F]	<b>Auto-ignition Temperature</b>	>400 °C [>752 °F]
<b>Evaporation Rate</b>	Not available	<b>Decomposition Temperature</b>	Not available
<b>Flammability</b>	Not available	<b>Viscosity @25 °C</b>	Not available

a) value based on supplier SDS

**Section 10: Stability and Reactivity**

<b>Reactivity</b>	Not available
<b>Chemical Stability</b>	Chemically stable at normal temperatures and pressures
<b>Conditions to Avoid</b>	Avoid ignition sources, open flames, and incompatible substances.
<b>Incompatibilities</b>	strong acids, strong oxidants, epoxides, ketones
<b>Polymerization</b>	Will not occur
<b>Decomposition</b>	Does not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

**8329HTC**
**(PART B)**
**Section 11: Toxicological Information**
**Summary of Effects and Symptoms by Routes of Exposure**

<b>Eyes</b>	May cause redness, severe irritation, pain, or eye damage.
<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>	Low toxicity: may cause irritation.
<b>Chronic</b>	Prolonged and repeated exposure may lead to skin sensitization.

**Acute Toxicity (Lethal Exposure Concentrations)**

<b>Chemical Name</b>	<b>LD50 oral</b>	<b>LD50 dermal</b>	<b>LC50 inhalation</b>
aluminum nitride	>2 000 mg/kg Rat	Not available	Not available
fatty acids, C18-unsatd., dimers, polymers with tall-oil fatty acids and triethylenetetramine	>2 000 mg/kg Rat	>2 000 mg/kg Rat	Not available
aluminum (fume or dust only)	>5 000 mg/kg Rat	Not available	Not available
silica, amorphous, fumed, cryst.-free	Not available	Not available	Not available
Mixture ATE	>2 000 mg/kg	>5 000 mg/kg	Not available

*Note:* Toxicity data from ECHA was consulted. The data from supplier SDSs were also consulted.

*Section continued on the next page...*

**8329HTC****(PART B)****Other Toxicological Effects**

<b>Skin corrosion/irritation</b>	Based on available data, the epoxy hardener causes eye damage.
<b>Serious eye damage/irritation</b>	Based on available data, the epoxy hardener causes skin irritation.
<b>Respiratory and skin sensitization</b> (allergic reactions)	Based on animal studies on the epoxy hardener, this product causes skin sensitization.
<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>	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 $>20.5 \text{ mm}^2/\text{s}$ at $40 \text{ }^\circ\text{C}$ .

**8329HTC****(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.

Aluminum nitride is an acute and chronic category 1 (M=1) environmental toxicant with a minimal LC50 96h of 0.57 mg/L for *Oncorhynchus mykiss* (rainbow trout) and a chronic NOEC value of 0.22 ug/L for fishes.

**Acute Ecotoxicity**

Category 1

Very toxic to aquatic life

**Chronic Ecotoxicity**

Category 1

Very toxic to aquatic life with long lasting effect

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.

**8329HTC**
**(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.**

**TDG: Sizes 5 kg and under**

*Part B of 8329HTC-50ML,  
 8329HTC-400ML kits*

**NOT REGULATED** in TDG  
 per Special Provisions 99(2)

**49 CFR: Sizes greater than 5 kg**

*FOR REFERENCE ONLY*

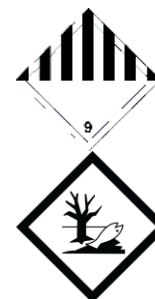
**UN number:** UN3077

**Shipping Name:**  
 ENVIRONMENTALLY HAZARDOUS  
 SUBSTANCE, SOLID, N.O.S.  
 (aluminum nitride)

**Class:** 9

**Packing Group:** III

**Marine Pollutant:** Yes



**49 CFR: Sizes 5 kg and under**

*Part B of 8329HTC-50ML,  
 8329HTC-400ML kits*

**NOT REGULATED** in 49 CFR  
 per exception 171.4 (c)(2)

**Special Provision 99 (2):** These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety.

**171.4 (c) Exceptions:**

(2) Single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other requirements of this subchapter provided the packagings meet the general requirements in §§ 173.24 and 173.24a. This exception does not apply to marine pollutants that are a hazardous waste or a hazardous substance. In the case of marine pollutants also meeting the criteria for inclusion in another hazard class, all provisions of this subchapter relevant to any additional hazards continue to apply.

*Section continued on the next page*

**8329HTC****(PART B)****Air****Refer to ICAO-IATA Dangerous Goods Regulations.**

Sizes 5 kg and under  
*Part B of 8329HTC-50ML,  
8329HTC-400ML kits*

**NOT REGULATED**

On air waybill write:  
"Not Restricted, as per  
Special Provisions A197"

Sizes greater than 5 kg  
*FOR REFERENCE ONLY*

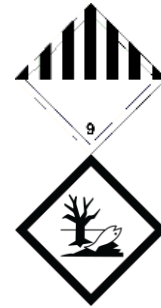
**UN number:** UN3077

**Shipping Name:**  
ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, SOLID, N.O.S.  
(aluminum nitride)

**Class:** 9

**Packing Group:** III

**Marine Pollutant:** Yes



**Special Provision A197:** These substances when transported in single or combination packagings containing net quantity per single or inner packaging of less than 5 L or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of these Regulations provided the packagings meet the general provisions 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

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**8329HTC**

**(PART B)**

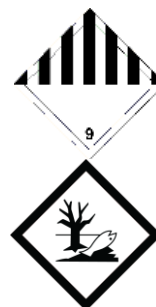
**Sea**

**Refer to IMDG regulations.**

Sizes 5 kg and under  
*Part B of 8329HTC-50ML, 8329HTC-400ML kits*  
**NOT REGULATED**  
 per 2.10.2.7

Sizes greater than 5 kg  
*FOR REFERENCE ONLY*

**UN number:** UN3077  
**Shipping Name:**  
 ENVIRONMENTALLY HAZARDOUS  
 SUBSTANCE, SOLID, N.O.S.  
 (aluminum nitride)  
**Class:** 9  
**Packing Group:** III  
**Marine Pollutant:** Yes



**2.10.2.7:** Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provision of this Code relevant to marine pollutants provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. In the case of marine pollutants also meeting the criteria for inclusion in another hazard class, all provisions of this Code relevant to any additional hazards continue to apply.

**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/NDSL.

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

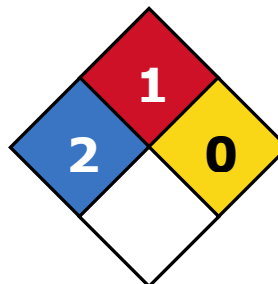
The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

*Section continued on the next page*



**8329HTC****(PART B)****USA****Other Classifications****HMIS<sup>®</sup> RATING**

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

**NFPA<sup>®</sup> 704 CODES**

*Approximate HMIS and NFPA Risk Ratings Legend:*

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

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

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

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

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

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

This product does not contain substances 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)

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, 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.

**8329HTC****(PART B)****Section 16: Other Information****SDS Prepared by** Regulatory Department**Date of Revision** 21 April 2023**Supersedes** Note applicable**Reason for Changes:** First version of SDS.**Reference**

1) ACGIH 2022 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 (2022).

**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*

**8329HTC****(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).

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