

TIMCOOL1.4-B

(PART B)

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: TimCool1.4-B**Other Means of Identification:** Thermal Conductivity Epoxy Compound (Part B)**Related Part #** TimCool1.4-1.2L

Recommended Use and Restriction on Use


Use: Epoxy hardener for use with resins to pot devices or encapsulate components**Uses Advised Against:** Not for use as a spray coating

Details of Manufacturer or Importer

Manufacturer

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

 +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 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

TIMCOOL1.4-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
Respiratory Sensitizer	1	Danger	Health
Skin Sensitization	1	Warning	Exclamation
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
	H318: Causes serious eye damage
	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
	H317: May cause an allergic skin reaction H315: Causes skin irritation

Section continued on the next page

TIMCOOL1.4-B**(PART B)***Continued...*

Prevention	Precautionary Statements
P102	Keep out of reach of children.
P261	Avoid breathing fumes and vapors.
P284	In case of inadequate ventilation, wear respiratory protection.
P280	Wear protective gloves, protective clothing, and eye protection.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
Response	Precautionary Statements
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
P302 + P352	IF ON SKIN: Wash with plenty 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.
Storage	Precautionary Statements
none	Not applicable
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
None	None	None	None

TIMCOOL1.4-B
(PART B)
Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
11070-44-3	tetrahydromethylphthalic anhydride	95–100% *
103-83-3	benzyltrimethylamine	2–3% *

* 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>
IF IN EYES	P305 + P351 + P338, P310
Immediate Symptoms	<i>redness, severe irritation, pain, burns</i>
Response	Rinse cautiously with water for 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
IF INHALED	P304 + P340, P342 + P311
Immediate Symptoms	<i>cough, irritation of the respiratory track, asthma, difficulty breathing</i>
Response	Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
IF ON SKIN	P302 + P352, P333 + P313, P362 + P364
Immediate Symptoms	<i>redness, irritation, rash (allergic contact dermatitis)</i>
Response	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.
IF SWALLOWED	P301 + P330, P331
Immediate Symptoms	<i>irritation</i>
Response	Rinse mouth. Do not induce vomiting.

Advice to Physicians

Not available

TIMCOOL1.4-B**(PART B)****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 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	Avoid breathing fumes and 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. 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.

TIMCOOL1.4-B**(PART B)****Section 7: Handling and Storage****Prevention**

Keep out of reach of children.

Avoid breathing fumes and vapors.

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

Avoid release to the environment.

Handling

Wear protective gloves, protective clothing, and eye protection.

Wash hands thoroughly after handling.

Take off contaminated clothing and wash it before reuse.

Collect spillage.

Storage

Not applicable

TIMCOOL1.4-B**(PART B)****Section 8: Exposure Controls/Personal Protection****Substances with Occupational Exposure Limit Values**

Contains no substances with occupational exposure limits.

Engineering Controls

Ventilation Keep overall exposure as low as possible.

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 fumes and vapors, 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.

TIMCOOL1.4-B**(PART B)****Section 9: Physical and Chemical Properties**

Physical State	Liquid	Lower Flammability Limit	1.7%
Appearance	Clear amber	Upper Flammability Limit	10.5%
Odor	Ammonia like	Vapor Pressure @20 °C	Not available
Odor Threshold	Not available	Vapor Density	Not available
pH	Not available	Relative Density @25 °C	1.2
Freezing/Melting Point	Not available	Solubility in Water	Partially soluble
Initial Boiling Point	Not available	Partition Coefficient n-octanol/water	Not available
Flash Point	>101 °C [>214 °F]	Auto-ignition Temperature	Not available
Evaporation Rate	Not available	Decomposition Temperature	Not available
Flammability	Non Flammable	Viscosity @25 °C	Not available

TIMCOOL1.4-B**(PART B)****Section 10: Stability and Reactivity**

Reactivity	Reacts exothermically with ketones and epoxides. May attack metals such as aluminum, zinc, copper, and their alloys.
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
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 chemical burns, severe eye irritation, eye redness or pain.
Skin	May cause redness, serious skin irritation, and allergic contact dermatitis.
Inhalation	Inhalation of vapors or mist may cause irritation to the nose, throat and lung (upper respiratory tract), asthma, and respiratory difficulties.
Ingestion	May cause severe irritation or corrosive burns to the mouth, throat, esophagus, and stomach. May cause allergic reactions.
Chronic	Prolonged and repeated exposure to uncured epoxy hardener may lead to skin and respiratory sensitization.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
tetrahydromethylphthalic anhydride	>2 240 mg/kg Rat	>2 000 mg/kg Rat	Not available
benzyltrimethylamine	>579 mg/kg Rat	>1477 mg/kg Rabbit	2 052 mg/m ³ Rat
	> 2 000 mg/kg	> 2 000 mg/kg	> 10 mg/L

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

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TIMCOOL1.4-B**(PART B)****Other Toxicological Effects**

Skin corrosion/irritation	The tetrahydromethylphthalic anhydride causes skin irritation.
Serious eye damage/irritation	Tetrahydromethylphthalic anhydride and benzyldimethylamine cause severe eye damage.
Respiratory and skin sensitization (allergic reactions)	The tetrahydromethylphthalic anhydride may cause skin and respiratory sensitization.
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	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.

TIMCOOL1.4-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 benzyldimethylamine is a category 2 chronic marine pollutant with a LC50 48h 59.3 mg/L for *Oryzia latipes*, LC50 96 h 37.8 mg/L for *Pimephales promelas* (fathead minnow); an EC50 48 h >100 mg/L for *Daphnia magna* (water flea), and 1.34 mg/L for *Desmodesmus subspicatus* (green algae).

Based on available data, tetrahydromethylphthalic anhydride is not classified as environmental hazard according to GHS criteria.

Acute Ecotoxicity

See chronic ecotoxicity

Chronic Ecotoxicity

Category 3

Harmful to aquatic life with long lasting effect

Avoid release to the environment.

Biodegradability

Not readily biodegradable

Bioaccumulation

Not available

Other Effects

Not available

TIMCOOL1.4-B**(PART B)****Section 13: Disposal Considerations**

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) and **US DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Not Regulated

Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Not Regulated

Sea

Refer to IMDG Dangerous Goods Regulations.

Not Regulated

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

All hazardous ingredients are listed on the DSL.

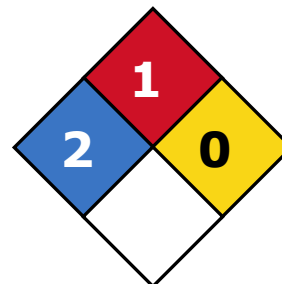
Hazardous Products Act (R.S.C., 1985, c. H-3)

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

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TIMCOOL1.4-B**(PART B)****USA****Other Classifications****HMIS[®] RATING**

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

NFPA[®] 704 CODES

Approximate HMIS and NFPA Risk Ratings Legend:

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

CAA (Clean Air Act, USA)

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

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

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

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TIMCOOL1.4-B**(PART B)****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 Revision 04 July 2023

Supersedes Not applicable

Reason for Changes: First release

Reference

1) ACGIH 2023 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 (2023).

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

Page **14** of **15**

Date of Revision: 04 July 2023 / Ver. 1.00

TIMCOOL1.4-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.

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