

according to 1907/2006/EC, Article 31

Printing date 11.01.2024

Version number 1

Revision: 11.01.2024

## 1 Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

· **Trade name:** 834HTC-Part B

· **Other Means of Identification:** High Thermal Conductivity Epoxy (Part B)

· **Related Part Number:**

834HTC-B, 834HTC-B-900ML, 834HTC-B-4.25L, 834HTC-B-45L, 834HTC-B-108L

· **UFI:** 28J0-M0CX-T00J-CRKD

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Not available

· **Application of the substance / the mixture** Epoxy hardener for use with resins

· **1.3 Details of the supplier of the safety data sheet** M.G. Chemicals Ltd.

· **Manufacturer/Supplier:**

MG Chemicals Ltd. (Head Office)  
1210 Corporate Drive  
Burlington, Ontario L7L 5R6  
CANADA  
+(1) 800-340-0772

MG Chemicals  
Heame House, 23 Bliston Street  
Sedgely Dudley DY3 1JA.  
UNITED KINGDOM  
+(44) 1663 362888 sales@mgchemicals.com

MG Chemicalst Ltd.  
Level 2, Vision Exchange, Building Territorials Street,  
Zone 1, Central Business, District,  
Birkirkara CBD 1070,  
MALTA

· **Further information obtainable from:** sds@mgchemicals.com

· **1.4 Emergency telephone number:**

Verisk 3E (Access code: 335388), +(44) 20 3514787

Other emergency telephone numbers: +(0) 800 680 0425

Members of the public seeking specific information on poisons should contact:

In England and Wales: NHS 111 - dial 111

In Scotland: NHS 24 - dial 111

## 2 Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS06 skull and crossbones

Acute Tox. 3

H311 Toxic in contact with skin.

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GHS08 health hazard

STOT RE 2      H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 corrosion

Skin Corr. 1A      H314 Causes severe skin burns and eye damage.  
Eye Dam. 1      H318 Causes serious eye damage.



GHS07

Acute Tox. 4      H302 Harmful if swallowed.  
Acute Tox. 4      H332 Harmful if inhaled.  
Skin Sens. 1      H317 May cause an allergic skin reaction.  
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

**2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

**Hazard pictograms**

GHS05    GHS06    GHS08

**Signal word Danger****Hazard-determining components of labelling:**

3-aminomethyl-3,5,5-trimethylcyclohexylamine  
2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)

**Hazard statements**

H302+H332 Harmful if swallowed or if inhaled.  
H311      Toxic in contact with skin.  
H314      Causes severe skin burns and eye damage.  
H317      May cause an allergic skin reaction.  
H373      May cause damage to organs through prolonged or repeated exposure.  
H412      Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P101      If medical advice is needed, have product container or label at hand.  
P102      Keep out of reach of children.  
P103      Read carefully and follow all instructions.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
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/doctor.  
P321      Specific treatment (see on this label).  
P361+P364      Take off immediately all contaminated clothing and wash it before reuse.

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P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.








- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Determination of endocrine-disrupting properties**
- Endocrine Disruptor substance  $\geq 0.1\%$  = none

### 3 Composition/information on ingredients

#### · 3.2 Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

#### · **Dangerous components:**

- |                   |  |       |
|-------------------|--|-------|
| CAS: 2855-13-2    | 3-aminomethyl-3,5,5-trimethylcyclohexylamine   | 64.0% |
| EINECS: 220-666-8 |  Skin Corr. 1B, H314;  Eye Dam. 1, H318;  Acute Tox. 4, H302; Skin Sens. 1A, H317<br>ATE: LD50 oral: 1,030 mg/kg<br>Specific concentration limit: Skin Sens. 1A; H317: C $\geq 0.001\%$               |       |
| CAS: 6864-37-5    | 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)   | 24.0% |
| EINECS: 229-962-1 |  Acute Tox. 3, H311; Acute Tox. 3, H331;  Skin Corr. 1A, H314;  Aquatic Chronic 2, H411;  Acute Tox. 4, H302 |       |

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First aid measures

#### · 4.1 Description of first aid measures

##### · **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

In case of irregular breathing or respiratory arrest provide artificial respiration.

##### · **After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

##### · **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

##### · **After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

##### · **After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

#### · **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

#### · **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Firefighting measures

#### · 5.1 Extinguishing media

##### · **Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

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- **5.2 Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

**6 Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Mount respiratory protective device.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**  
Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralising agent.  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye/face protection**



Tightly sealed goggles

## 9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Fluid

· **Colour:**

Clear

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

· **Boiling point or initial boiling point and boiling range**

116 °C

· **Flammability**

Not applicable.

· **Lower and upper explosion limit**

· **Lower:**

0.5 Vol % (6864-37-5 2,2'-dimethyl-4,4'methylenebis(cyclohexylamine))

· **Upper:**

2.8 Vol % (6864-37-5 2,2'-dimethyl-4,4'methylenebis(cyclohexylamine))

· **Flash point:**

100 °C

· **Auto-ignition temperature:**

275 °C (6864-37-5 2,2'-dimethyl-4,4'methylenebis(cyclohexylamine))

· **Decomposition temperature:**

Not determined.

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· pH	Not determined.
· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Solubility	
· water:	Fully miscible.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 30 °C:	0 hPa (6864-37-5 2,2'-dimethyl-4,4'methylenebis(cyclohexylamine))
· Density and/or relative density	
· Density at 20 °C:	0.94 g/cm <sup>3</sup>
· Relative density	Not determined.
· Bulk density:	897 kg/m <sup>3</sup>
· Vapour density	Not determined.
· 9.2 Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· VOC (EC)	0.00 %
· Solids content:	12.0 %
· Change in condition	
· Evaporation rate	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

**10 Stability and reactivity**

- 10.1 Reactivity No further relevant information available.

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- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
  - **Acute toxicity**  
Harmful if swallowed or if inhaled.  
Toxic in contact with skin.
  - **LD/LC50 values relevant for classification:**
- |   |          |                          |  |
|---|----------|--------------------------|--|
| <b>ATE (Acute Toxicity Estimates)</b>                             |          |                          |  |
| Oral  | LD50     | 729–875 mg/kg            |  |
| Dermal  | LD50     | 833–1,667 mg/kg (rabbit) |  |
| Inhalative  | LC50/4 h | 1.75 mg/l (rat)          |  |
| <b>2855-13-2 3-aminomethyl-3,5,5-trimethylcyclohexylamine</b>     |          |                          |  |
| Oral  | LD50     | 1,030 mg/kg (ATE)        |  |
| <b>6864-37-5 2,2'-dimethyl-4,4'-methylenebis(cyclohexylamine)</b> |          |                          |  |
| Oral  | LD50     | 320–460 mg/kg (rat)      |  |
| Dermal  | LD50     | 200–400 mg/kg (rabbit)   |  |
| Inhalative  | LC50/4 h | 0.42 mg/l (rat)          |  |
- **Skin corrosion/irritation** Causes severe skin burns and eye damage.
  - **Serious eye damage/irritation** Causes serious eye damage.
  - **Respiratory or skin sensitisation** May cause an allergic skin reaction.
  - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
  - **Carcinogenicity** Based on available data, the classification criteria are not met.
  - **Reproductive toxicity** 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**  
May cause damage to organs through prolonged or repeated exposure.
  - **Aspiration hazard** Based on available data, the classification criteria are not met.
  - **11.2 Information on other hazards**
  - **Endocrine disrupting properties**
- None of the ingredients is listed.

## 12 Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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· **12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**· **Remark:** Harmful to fish· **Additional ecological information:**· **General notes:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Danger to drinking water if even extremely small quantities leak into the ground.

Harmful to aquatic organisms

**13 Disposal considerations**· **13.1 Waste treatment methods**· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**

HP6 Acute Toxicity

HP8 Corrosive

HP13 Sensitising

HP14 Ecotoxic

· **Uncleaned packaging:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.**14 Transport information**· **14.1 UN number or ID number**· **ADR, IMDG, IATA**

UN2922

· **14.2 UN proper shipping name**· **ADR**

2922 CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'methylenebis(cyclohexylamine), ISOPHORONEDIAMINE)

· **IMDG**

CORROSIVE LIQUID, TOXIC, N.O.S. (2,2'-dimethyl-4,4'methylenebis(cyclohexylamine), ISOPHORONEDIAMINE)

· **IATA**

Corrosive liquid, toxic, n.o.s. (2,2'-dimethyl-4,4'methylenebis(cyclohexylamine), ISOPHORONEDIAMINE)

· **14.3 Transport hazard class(es)**· **ADR**· **Class**

8 Corrosive substances.

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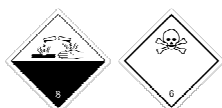
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· **Label** 8+6.1· **IMDG**

· **Class** 8 Corrosive substances.  
 · **Label** 8/6.1

· **IATA**

· **Class** 8 Corrosive substances.  
 · **Label** 8 (6.1)  
 · **14.4 Packing group**  
 · **ADR, IMDG, IATA** II  
 · **14.5 Environmental hazards:** Not applicable.  
 · **14.6 Special precautions for user** Warning: Corrosive substances.  
 · **Hazard identification number (Kemler code):** 86  
 · **EMS Number:** F-A,S-B  
 · **Stowage Category** B  
 · **Stowage Code** SW2 Clear of living quarters.  
 · **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.

· **Transport/Additional information:**· **ADR**

· **Limited quantities (LQ)** 1L  
 · **Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml  
 · **Transport category** 2  
 · **Tunnel restriction code** E

· **IMDG**

· **Limited quantities (LQ)** 1L  
 · **Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml  
 · **UN "Model Regulation":** UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S.  
 ( 2 , 2 ' - D I M E T H Y L -  
 4,4'METHYLENEBIS(CYCLOHEXYLAMINE),  
 ISOPHORONEDIAMINE), 8 (6.1), II

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**15 Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors**  
None of the ingredients is listed.
- **Regulated poisons**  
None of the ingredients is listed.
- **Reportable explosives precursors**  
None of the ingredients is listed.
- **Reportable poisons**  
None of the ingredients is listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
None of the ingredients is listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
None of the ingredients is listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**  
None of the ingredients is listed.
- **Regulation (EC) No 273/2004 on drug precursors**  
None of the ingredients is listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
None of the ingredients is listed.
- **15.2 Chemical safety assessment:**  
A Chemical Safety Assessment has not been carried out.

**16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Relevant phrases**  
H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H331 Toxic if inhaled.  
H411 Toxic to aquatic life with long lasting effects.
- **Department issuing SDS:** Product safety department.
- **Contact:** sds@mgchemicals.com
- **Date of previous version:** 11.01.2024

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**· Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

ATE: Acute toxicity estimate values

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 3: Acute toxicity – Category 3

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1A: Skin sensitisation – Category 1A

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**· \* Data compared to the previous version altered.**

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