Safety data sheet
according to UK REACH

Printing date 21.11.2024 Version number 4.01 (replaces version 4.00) Revision: 21.11.2024

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SECTION 1: Identification of the substance/mixture and of the company/ undertaking

· **1.1 Product identifier**

· **Trade name: 8320**

· **Other Means of Identification:** Epoxy hardener (Part B)

· **Related Part Number:**
8320-Part B, 832HT-B, 832B-B, 832C-B, 8320-125ML, 8320-150ML, 8320-1L, 8320-12L, 8320-20L, 832B-375ML (B), 832B-450ML (B), 832B-3L (B), 832B-12L (B), 832B-60L (B), 832C-375ML (B), 832C-450ML (B), 832C-3L (B), 832C-60L (B), 832HT-375ML (B), 832HT-3L (Kit)

· **UFI:** XDE0-U0A3-1009-KDCG

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

· **Application of the substance / the mixture** Epoxy Hardener

· **Uses advised against** Not for use as a spray coating

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

MG Chemicals Ltd. (Head Office)
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA
+(1) 905-331-1396
info@mgchemicals.com

MG Chemicals
Heame House, 23 Bliston Street
Sedgely Dudley DY3 1JA.
United Kingdom
+(44) 1663 362888

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
+(1) 760 476 3961
UK Toll free: +(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

(Contd. on page 2)

(Contd. of page 1)

SECTION 2: Hazards identification

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

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

GHS05 corrosion

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

GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

· **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 GHS07 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
fatty acids, C18-unsatd., dimers, reactionproducts with polyethylenepolyamines
3,6-diazaoctanethylenediamin

· **Hazard statements**
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P102	Keep out of reach of children.
P261	Avoid breathing fumes and vapors.
P280	Wear protective gloves / eye protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
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.
P501	Dispose of contents and container in accordance with local, regional, and national regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 3)

(Contd. of page 2)

· **vPvB:** Not applicable.
· **Determination of endocrine-disrupting properties** Endocrine Disruptor substance ≥ 0.1% = none

SECTION 3: Composition/information on ingredients

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

· **Dangerous components:**		
CAS: 68410-23-1	fatty acids, C18-unsatd., dimers, reactionproducts with polyethylenepolyamines	92.0%
	Eye Dam. 1, H318; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	
CAS: 112-24-3 EINECS: 203-950-6 Index number: 612-059-00-5	3,6-diazaoctanethylenediamin	8.0%
	Skin Corr. 1B, H314; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	

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

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:**
Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor.
· **After skin contact:**
Take off immediately all contaminated clothing. Wash with plenty of water or shower.
Immediately call a POISON CENTRE or doctor.
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice or attention.
· **After eye contact:**
Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor.
· **After swallowing:**
Rinse mouth. Do not induce vomiting.
Immediately call a POISON CENTER or doctor.

· **4.2 Most important symptoms and effects, both acute and delayed**
In case of exposure to nitrogen oxides (NOx) combustion products or triethylenetetramine vapors during a fire, the symptoms may be delayed.
For significant exposures, the exposed person should be kept under medical surveillance for 48 hours.

· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

(Contd. on page 4)

(Contd. of page 3)

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture**
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.
Inhalation of toxic smoke during fire may have delayed effects. Exposed person may need to be put under surveillance for 48 h.
· **Hazardous combustion products:**
Carbon Oxides (COx)
Nitrogen Oxides (NOx)

· **5.3 Advice for firefighters**
· **Protective equipment:** Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Do not breathe fumes,mist or vapors.
Remove or keep away all sources of extreme heat or open flames.

· **6.2 Environmental precautions:**
Avoid release to the environment.
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).
Collect liquid in a sealable, chemical-resistant container.
Wash residue with a paper towel and place dirty towels in container.
Use soap and water to remove the last traces of residue.

· **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.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Prevent formation of aerosols.
Wear protective gloves and eye protection.
Wash hands and exposed skin thoroughly after handling.
Take off contaminated clothing and wash it before reuse.
Collect spillage.
Contaminated work clothing should not be allowed out of the workplace.
Do not eat, drink, or smoke when using this product.
Avoid contact with skin and eyes.

(Contd. on page 5)

(Contd. of page 4)

· **Information about fire - and explosion protection:** No special measures required.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**
Keep in a dry and clean area, away from incompatible substances

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:**
Keep container tightly sealed.
Store locked up.

· **7.3 Specific end use(s)** See section 1.2

SECTION 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.
Refer to the national or regional occupational exposure limit regulation for abbreviations and acronyms.

· **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
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

· **Respiratory protection:**
Advice should be sought from respiratory protection specialists.
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.
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.

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

Protective gloves: EN374

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

(Contd. on page 6)

(Contd. of page 5)

· **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**

Safety glasses or tightly sealed goggles: EN 166

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· **Physical state**	Liquid
· **Form:**	Highly viscous
· **Colour:**	Amber coloured
· **Odour:**	musty & ammonia-like
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	Undetermined.
· **Boiling point or initial boiling point and boiling range**	Undetermined.
· **Flammability**	Non flammable
· **Lower and upper explosion limit**	
· **Lower:**	Not applicable
· **Upper:**	Not applicable
· **Flash point:**	122 °C
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity at 20 °C**	6,000 mm²/s
· **Dynamic:**	Not determined.
· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure at 20 °C:**	>0 hPa
· **Relative density at 25 °C:**	0.96
· **Vapour density (air=1):**	>5
· **Particle characteristics**	Not applicable.

· 9.2 Other information

· **9.2.1 Information with regard to physical hazard classes**	Not applicable
· **9.2.2 Other safety characteristics**	
· **Evaporation rate**	Not determined.
· **Ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Solvent content:**	
· **Organic solvents:**	Not available
· **VOC (EC)**	0.00 %

(Contd. on page 7)

(Contd. of page 6)

· **Solids content:**	0.0 %

SECTION 10: Stability and reactivity

· **10.1 Reactivity**
Reacts exothermically with ketones, halogenated hydrocarbons, cyanides, nitriles, and epoxides.
May attack metals such as aluminum, zinc, copper, and their alloys.

· **10.2 Chemical stability** Chemically stable at normal temperatures and pressures.
· **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**
Avoid open flames, excessive heat, sparks, ignition sources, and incompatible substances.

· **10.5 Incompatible materials:**
Strong oxidizing agents
Strong acids

· **10.6 Hazardous decomposition products:**
No dangerous decomposition products known.
Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
ATE (Acute Toxicity Estimates)		
Dermal	LD50	10,063 mg/kg (rabbit)

112-24-3 3,6-diazaoctanethylenediamin		
Oral	LD50	2,500 mg/kg (rat)
Dermal	LD50	805 mg/kg (rabbit)

· **Primary irritant effect:**
· **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** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **Summary of Effects and Symptoms by Routes of Exposure**
· **Eyes:**
eye damage, pain
redness, serious irritation

(Contd. on page 8)

(Contd. of page 7)

· **Skin:**
rash, allergic contact dermatitis
redness, irritation
chemical burns
Triethylenetetramine can be absorbed through skin leading to toxic effects.
When heated, hot triethylenetetramine vapors may also result in itching of the face with skin redness (erythema) and swelling (edema).
· **Inhalation:** irritation of the respiratory tract
· **Swallowed:**
May cause pain and corrosive burns to the mouth, throat, esophagus, and stomach.
irritation to the mouth, throat, esophagus, and stomach
allergic reactions
see inhalation symptoms
· **Additional toxicological information:**
· **Delayed and immediate effects as well as chronic effects from short and long-term exposure**
Prolonged or repeated exposure may cause skin allergies.

· **11.2 Information on other hazards**

· **Endocrine disrupting properties**
None of the ingredients is listed.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:**
Toxic to aquatic life with long lasting effects.
Avoid release to the environment.
Collect spillage.

112-24-3 3,6-diazaoctanethylenediamin	
EC50/ 48 h	24 mg/L (daphnia)
LC50 96h	420 mg/L (guppie)
IC50 72h	2 mg/L (algae)

· **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.

· **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.

· **12.7 Other adverse effects**
· **Remark:** Toxic for fish
· **Additional ecological information:**
· **General notes:**
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Must not reach sewage water or drainage ditch undiluted or unneutralised.

(Contd. on page 9)

(Contd. of page 8)

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation** This material and its container must be disposed of as hazardous waste.

· **European waste catalogue**	
HP8	Corrosive
HP13	Sensitising
HP14	Ecotoxic

· **Uncleaned packaging:**

· **Recommendation:**
Containers may still present a chemical hazard/ danger when empty.
Dispose of contents in accordance with all local, regional, national, and international regulations.
Where possible retain label warnings and SDS and observe all notices pertaining to the product.

* SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR, IMDG, IATA** UN2735

· **14.2 UN proper shipping name**

· **ADR, IMDG** AMINES, LIQUID, CORROSIVE, N.O.S. (3,6-diazaoctanethylenediamin, fatty acids, C18-unsatd., dimers, reactionproducts with polyethylenepolyamines)

· **IATA** Amines, liquid, corrosive, n.o.s. (3,6-diazaoctanethylenediamin, fatty acids, C18-unsatd., dimers, reactionproducts with polyethylenepolyamines)

· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**

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

· **14.4 Packing group**

· **ADR, IMDG, IATA** II

· **14.5 Environmental hazards:**

· **Marine pollutant:** MARINE POLLUTANT

(Contd. on page 10)

(Contd. of page 9)

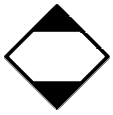
· **Special marking (ADR):**	ENVIRONMENTALLY HAZARDOUS
· **Special marking (IATA):**	ENVIRONMENTALLY HAZARDOUS

· **14.6 Special precautions for user** Not applicable.

· **Hazard identification number (Kemler code):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	(SGG18) Alkalis
· **Stowage Category**	A
· **Segregation Code**	SG35 Stow "separated from" SGG1-acids

· **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.

· **Transport/Additional information:**



Limited Quantity

832B-375ML, 832B-450ML, 832B-3L, 832C-375ML, 832C-450ML, 832C-3L, 832HT-375ML, 832HT-3L

· **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 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (3,6-DIAZAOCTANETHYLENEDIAMIN, FATTY ACIDS, C18-UNSATD., DIMERS, REACTIONPRODUCTS WITH POLYETHYLENEPOLYAMINES), 8, II

(Contd. on page 11)

(Contd. of page 10)

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Poisons Act**

· **Regulated explosives precursors (Part 1)**
None of the ingredients is listed.

· **Regulated poisons (Part 2)**
None of the ingredients is listed.

· **Reportable explosives precursors (Part 3)**
None of the ingredients is listed.

· **Reportable poisons (Part 4)**
None of the ingredients is listed.

· **Directive 2012/18/EU**
- · **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- · **Seveso category** E2 Hazardous to the Aquatic Environment
- · **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- · **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· **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.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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**
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

· **Classification according to Regulation (EC) No 1272/2008**	
Skin corrosion/irritation Serious eye damage/irritation Skin sensitisation Hazardous to the aquatic environment - long-term (chronic) aquatic hazard	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· **Department issuing SDS:** Regulatory department
· **Contact:** sds@mgchemicals.com
· **Date of previous version:** 21.07.2024
· **Version number of previous version:** 4.00

(Contd. on page 12)

(Contd. of page 11)

· **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
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
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.**