



Printing date 25.03.2024 Version number 2 (replaces version 1)

Revision: 25.03.2024

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

- · 1.1 Product identifier
- · Trade name: 8331-B
- · Other Means of Identification: Silver Conductive Epoxy Adhesive
- · Related Part Number: 8331-B, 8331-B-14G, 8331-B-50ML, 8331-B-200ML
- · UFI: SVG0-H0AK-W00N-S98C
- 1.2 Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
- Application of the substance / the mixture
   Electrically conductive epoxy adhesive hardener part 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

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

GB

Version number 2 (replaces version 1) Printing date 25.03.2024 Revision: 25.03.2024

Trade name: 8331-B

(Contd. of page 1)

### 2 Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Repr. 2

H361 Suspected of damaging fertility or the unborn child.



GHS05 corrosion

Skin Corr. 1B

H314 Causes severe skin burns and eye damage.

Eye Dam. 1

H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very 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 GHS08 GHS09

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

4-nonylphenol, branched

2-piperazin-1-ylethylamine

bisphenol A

2,2'-iminodiethylamine

diethylene triamine, reaction product withdiglycidyl ether of bisphenol A

· Hazard statements

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

Avoid release to the environment. P273

(Contd. on page 3)

Printing date 25.03.2024 Version number 2 (replaces version 1) Revision: 25.03.2024

Trade name: 8331-B

(Contd. of page 2)

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

- · 2.3 Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Determination of endocrine-disrupting properties

84852-15-3 4-nonylphenol, branched: List I

80-05-7 bisphenol A: List I

# 3 Composition/information on ingredients

- · 3.2 Mixtures
- · Description: Mixture of substances listed below with nonhazardous additions.
- · Dangerous components:

CAS: 7440-22-4 Silver (Powder < 0.0001mm)

67.0%

EINECS: 231-131-3 Aquatic Acute 1, H400 (M=1000); Aquatic Chronic 1, H410

(M=100)

CAS: 84852-15-3 4-nonylphenol, branched

22.0%

EINECS: 284-325-5 & Repr. 2, H361fd; Skin Corr. 1B, H314; Aquatic Acute 1,

H400; Aquatic Chronic 1, H410; (1) Acute Tox. 4, H302

CAS: 140-31-8 2-piperazin-1-ylethylamine

7.0%

EINECS: 205-411-0 Skin Corr. 1B, H314; Eye Dam. 1, H318; Acute Tox. 4,

H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic

3, H412

CAS: 80-05-7 bisphenol A

1.0%

EINECS: 201-245-8 ♦ Repr. 1B, H360F; ♦ Eye Dam. 1, H318; ♦ Aquatic Acute 1, H400 (M=1); Aquatic Chronic 2, H411 (M=10); ♠ Skin Sens. 1,

H317; STOT SE 3, H335

CAS: 111-40-0 2,2'-iminodiethylamine

1.0%

EINECS: 203-865-4 📀 Skin Corr. 1B, H314; 🗘 Acute Tox. 4, H302; Acute Tox. 4,

H312; Skin Sens. 1, H317

CAS: 68411-71-2 diethylene triamine, reaction product withdiglycidyl ether of 1.0%

bisphenol A

Acute Tox. 4, H302; Skin Sens. 1, H317

·SVHC

84852-15-3 4-nonylphenol, branched

80-05-7 bisphenol A

· 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.
- 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.

(Contd. on page 4)

Printing date 25.03.2024 Version number 2 (replaces version 1) Revision: 25.03.2024

Trade name: 8331-B

(Contd. of page 3)

- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eve contact:

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

- After swallowing: 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:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

• 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.

(Contd. on page 5)

Printing date 25.03.2024 Version number 2 (replaces version 1) Revision: 25.03.2024

Trade name: 8331-B

(Contd. of page 4)

· 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:

#### 111-40-0 2,2'-iminodiethylamine

WEL Long-term value: 4.3 mg/m³, 1 ppm Sk

- · 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

Wash hands before breaks and at the end of work.

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

(Contd. on page 6)

Printing date 25.03.2024 Version number 2 (replaces version 1) Revision: 25.03.2024

Trade name: 8331-B

(Contd. of page 5) · Colour: According to product specification · Odour: Characteristic · Odour threshold: Not determined. · Melting point/freezing point: Undetermined. · Boiling point or initial boiling point and boiling range *220.4* ℃ (140-31-8 2-piperazin-1-ylethylamine) · Flammability Not applicable. · Lower and upper explosion limit · Lower: Not determined. Upper: Not determined. Flash point: >93.3 °C Auto-ignition temperature: 315  $\mathcal{C}$  (140-31-8 2-piperazin-1-ylethylamine) Decomposition temperature: Not determined. · pH Not determined. · Viscosity: · Kinematic viscosity at 20 °C 20.5 mm<sup>2</sup>/s · Dynamic: Not determined. Solubility · water: Fully miscible. · Partition coefficient n-octanol/water (log value) Not determined. Vapour pressure: Not determined. Density and/or relative density · Density at 20 °C: 2.4 g/cm3 Relative density Not determined. · 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: 4.0 % · 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

(Contd. on page 7)

Printing date 25.03.2024 Version number 2 (replaces version 1) Revision: 25.03.2024

Trade name: 8331-B

(Contd. of page 6)

Oxidising solids
 Organic peroxides
 Corrosive to metals
 Desensitised explosives

# 10 Stability and reactivity

- · 10.1 Reactivity No further relevant information available.
- 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 Based on available data, the classification criteria are not met.
- · LD/LC50 values relevant for classification:

### ATE (Acute Toxicity Estimates)

Oral LD50 2,131 mg/kg

Dermal LD50 11,271 mg/kg (rabbit)

### 140-31-8 2-piperazin-1-ylethylamine

Oral LD50 2,140 mg/kg (rat)

Dermal LD50 880 mg/kg (rabbit)

#### 80-05-7 bisphenol A

Oral LD50 3,250 mg/kg (rat)

Dermal LD50 3,000 mg/kg (rabbit)

#### 111-40-0 2,2'-iminodiethylamine

Oral LD50 1,080 mg/kg (rat)

Dermal LD50 1,090 mg/kg (rabbit)

- · 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 Suspected of damaging fertility or the unborn child.
- 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.
- · 11.2 Information on other hazards
- Endocrine disrupting properties

84852-15-3 4-nonylphenol, branched: List I

80-05-7 bisphenol A: List I

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Printing date 25.03.2024 Version number 2 (replaces version 1) Revision: 25.03.2024

Trade name: 8331-B

(Contd. of page 7)

# 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.
- · 12.6 Endocrine disrupting properties

For information on endocrine disrupting properties see section 11.

- · 12.7 Other adverse effects
- · Remark: Very toxic for 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.

Also poisonous for fish and plankton in water bodies.

Very toxic for 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

HP10 Toxic for reproduction

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
- · 14.2 UN proper shipping name

· ADR

UN3263

3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched, N-AMINOETHYLPIPERAZINE), ENVIRONMENTALLY HAZARDOUS

(Contd. on page 9)

Version number 2 (replaces version 1) Printing date 25.03.2024 Revision: 25.03.2024

Trade name: 8331-B

(Contd. of page 8) · IMDG CORROSIVE SOLID, BASIC, ORGANIC,

N.O.S. (4-nonylphenol, branched, N-AMINOETHYLPIPERAZINE), MARINE

**POLLUTANT** 

·IATA Corrosive solid, basic, organic, n.o.s. (4-

8

branched, nonylphenol,

*AMINOETHYLPIPERAZINE*)

· 14.3 Transport hazard class(es)

· ADR, IMDG



· Class 8 Corrosive substances.

· Label

·IATA

· Label



· Class 8 Corrosive substances.

· 14.4 Packing group

· ADR, IMDG, IATA

· 14.5 Environmental hazards:

Product contains environmentally hazardous

80

F-A.S-B

substances: 4-nonylphenol, branched Symbol (fish and tree)

SG35 Stow "separated from" SGG1-acids

Warning: Corrosive substances.

Symbol (fish and tree)

· Marine pollutant: Special marking (ADR):

· 14.6 Special precautions for user

· Hazard identification number (Kemler

code):

· EMS Number:

Segregation groups

· Stowage Category

· Segregation Code

14.7 Maritime transport in bulk according

to IMO instruments

Not applicable.

(SGG18) Alkalis

Transport/Additional information:

· Limited quantities (LQ)

Excepted quantities (EQ)

1 kg

Code: E2

Maximum net quantity per inner packaging: 30

Maximum net quantity per outer packaging: 500

ml

· Transport category 2 Ε · Tunnel restriction code

· IMDG

· Limited quantities (LQ)

Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30

1 kg

Maximum net quantity per outer packaging: 500

(Contd. on page 10)

(Contd. of page 9)

### according to Regulation (EC) No 1907/2006, Article 31

Printing date 25.03.2024 Version number 2 (replaces version 1) Revision: 25.03.2024

Trade name: 8331-B

UN "Model Regulation":

ml UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-NONYLPHENOL, BRANCHED, N-AMINOETHYLPIPERAZINE), 8,

II, ENVIRONMENTALLY HAZARDOUS

# 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.
- · Seveso category E1 Hazardous to the Aquatic Environment
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
- · Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- · REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- Regulation (EU) No 649/2012

84852-15-3 4-nonylphenol, branched: Annex I Part 1 Annex I Part 2

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.

- · National regulations:
- · Substances of very high concern (SVHC) according to UK REACH

84852-15-3 4-nonylphenol, branched

80-05-7 bisphenol A

· 15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

Printing date 25.03.2024 Version number 2 (replaces version 1) Revision: 25.03.2024

Trade name: 8331-B

(Contd. of page 10)

### 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.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eve damage.

H335 May cause respiratory irritation.

H360F May damage fertility.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

· Department issuing SDS: Product safety department.

· Contact: sds@machemicals.com

· Date of previous version: 25.03.2024

· Version number of previous version: 1

#### 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

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

Skin Sens. 1: Skin sensitisation - Category 1

Repr. 1B: Reproductive toxicity - Category 1B

Repr. 2: Reproductive toxicity - Category 2

Repr. 2: Reproductive toxicity - Category 2

STOT SE 3: Specific target organ toxicity (single exposure) - Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - 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.