



Kit Revision Date: 25 March 2024

## 8331 SILVER CONDUCTIVE 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	8331-A	Electrically conductive epoxy adhesive resin part for use with hardeners
B	8331-B	Electrically conductive epoxy adhesive hardener part for use 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.

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

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-A****· Other Means of Identification:** Silver Conductive Epoxy Adhesive (Part A)**· Related Part Number:** 8331-A, 8331-14G, 8331-50ML, 8331-200ML**· UFI:** 7TG0-00N6-M004-4XP9**· 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 resin part for use with hardeners

**· 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

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## 2 Hazards identification

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



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 Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

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**



GHS07 GHS09

- **Signal word** Warning

- **Hazard-determining components of labelling:**

phenol, polymer with formaldehyde, glycidyl ether

- **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

- **Precautionary statements**

P102 Keep out of reach of children.

P273 Avoid release to the environment.

P280 Wear protective gloves.

P302+P352 IF ON SKIN: Wash with plenty of 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.

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

P337+P313 If eye irritation persists: 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**

Endocrine Disruptor substance  $\geq 0.1\%$  = none

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### 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: 28064-14-4	phenol, polymer with formaldehyde, glycidyl ether	33.0%
	⚠ Aquatic Chronic 2, H411; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	

· **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**

· **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. If symptoms persist, consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

· **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.

· **5.2 Special hazards arising from the substance or mixture**

Vapors are heavier than air. Vapors may travel to sources of ignition near the ground. They can cause flash fire or ignite explosively.

· **5.3 Advice for firefighters**

· **Protective equipment:** No special measures required.

### 6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Not required.

· **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).

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**· 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** No special precautions are necessary if used correctly.

· **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:** 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

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Respiratory protection:** Not required.

· **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.

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· **Eye/face protection**

Tightly sealed goggles

## 9 Physical and chemical properties

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

#### · General Information

· <b>Physical state</b>	Fluid
· <b>Colour:</b>	According to product specification
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Boiling point or initial boiling point and boiling range</b>	Undetermined.
· <b>Flammability</b>	Not applicable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Flash point:</b>	>150 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Kinematic viscosity at 20 °C</b>	>20.5 mm <sup>2</sup> /s
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Fully miscible.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure:</b>	Not determined.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	2.5 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.

### · 9.2 Other information

· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Solvent content:</b>	
· <b>VOC (EC)</b>	0.00 %
· <b>Solids content:</b>	0.0 %
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not determined.
· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void

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· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Void
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Void
· <b>Corrosive to metals</b>	Void
· <b>Desensitised explosives</b>	Void

## 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.
- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **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.
- **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.

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- **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:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
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.  
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**  
HP4 Irritant - skin irritation and eye damage  
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** UN3077
- **14.2 UN proper shipping name**
- **ADR** NOT REGULATED by Ground ADR Special Provision 375 for sizes 5kg or less.  
3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
- **IMDG** NOT IMDG-regulated for sea freight according to 2.10.2.7 for sizes up to 5 kg.  
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
- **IATA** NOT REGULATED by Air IATA Special Provision A197 for sizes 5kg or less.  
Environmentally hazardous substance, solid, n.o.s.

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## · 14.3 Transport hazard class(es)

· ADR, IMDG, IATA



· **Class** 9 Miscellaneous dangerous substances and articles.

· **Label** 9

## · 14.4 Packing group

· ADR, IMDG, IATA III

## · 14.5 Environmental hazards:

· **Marine pollutant:** Symbol (fish and tree)· **Special marking (ADR):** Symbol (fish and tree)· **Special marking (IATA):** Symbol (fish and tree)· **14.6 Special precautions for user** Warning: Miscellaneous dangerous substances and articles.· **Hazard identification number (Kemler code):** 90· **EMS Number:** F-A,S-F· **Stowage Category** A· **Stowage Code** SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.· **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)** 5 kg· **Excepted quantities (EQ)** Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category** 3· **Tunnel restriction code** (-)· **IMDG**· **Limited quantities (LQ)** 5 kg· **Excepted quantities (EQ)** Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **UN "Model Regulation":**

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. 9, III

**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.

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· **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

· **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**

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

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.

· **Department issuing SDS:** Product safety department.

· **Contact:** sds@mgchemicals.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

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*CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Skin Irrit. 2: Skin corrosion/irritation – Category 2**Eye Irrit. 2: Serious eye damage/eye irritation – Category 2**Skin Sens. 1: Skin sensitisation – Category 1**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***. \* Data compared to the previous version altered.**

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**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

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## 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 with diglycidyl 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.
- P273                      Avoid release to the environment.

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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; ⚠ 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 with diglycidyl ether of bisphenol A	1.0%
	⚠ Acute Tox. 4, H302; Skin Sens. 1, H317	

· **SVHC**

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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.

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- **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:** 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:**  
CO<sub>2</sub>, 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.

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· **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/m<sup>3</sup>, 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

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· <b>Colour:</b>	According to product specification
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.
· <b>Melting point/freezing point:</b>	Undetermined.
· <b>Boiling point or initial boiling point and boiling range</b>	220.4 °C (140-31-8 2-piperazin-1-ylethylamine)
· <b>Flammability</b>	Not applicable.
· <b>Lower and upper explosion limit</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Flash point:</b>	>93.3 °C
· <b>Auto-ignition temperature:</b>	315 °C (140-31-8 2-piperazin-1-ylethylamine)
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Kinematic viscosity at 20 °C</b>	20.5 mm <sup>2</sup> /s
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Fully miscible.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Vapour pressure:</b>	Not determined.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	2.4 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>9.2 Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Solvent content:</b>	
· <b>VOC (EC)</b>	0.00 %
· <b>Solids content:</b>	4.0 %
· <b>Change in condition</b>	
· <b>Evaporation rate</b>	Not determined.
· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Void
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void

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- |                                  |      |
|----------------------------------|------|
| · <b>Oxidising solids</b>        | Void |
| · <b>Organic peroxides</b>       | Void |
| · <b>Corrosive to metals</b>     | Void |
| · <b>Desensitised explosives</b> | Void |

## 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**

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## 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** UN3263
- **14.2 UN proper shipping name**
- **ADR** 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched, N-A M I N O E T H Y L P I P E R A Z I N E ) , ENVIRONMENTALLY HAZARDOUS

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· <b>IMDG</b>	<b>CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched, N-AMINOETHYLPIPERAZINE), MARINE POLLUTANT</b>
· <b>IATA</b>	<i>Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched, N-AMINOETHYLPIPERAZINE)</i>
· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR, IMDG</b>	
	
· <b>Class</b>	8 Corrosive substances.
· <b>Label</b>	8
<hr/>	
· <b>IATA</b>	
	
· <b>Class</b>	8 Corrosive substances.
· <b>Label</b>	8
· <b>14.4 Packing group</b>	
· <b>ADR, IMDG, IATA</b>	II
· <b>14.5 Environmental hazards:</b>	<i>Product contains environmentally hazardous substances: 4-nonylphenol, branched</i>
· <b>Marine pollutant:</b>	<i>Symbol (fish and tree)</i>
· <b>Special marking (ADR):</b>	<i>Symbol (fish and tree)</i>
· <b>14.6 Special precautions for user</b>	<i>Warning: Corrosive substances.</i>
· <b>Hazard identification number (Kemler code):</b>	80
· <b>EMS Number:</b>	F-A,S-B
· <b>Segregation groups</b>	(SGG18) Alkalis
· <b>Stowage Category</b>	B
· <b>Segregation Code</b>	SG35 Stow "separated from" SGG1-acids
· <b>14.7 Maritime transport in bulk according to IMO instruments</b>	Not applicable.
· <b>Transport/Additional information:</b>	
<hr/>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1 kg
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	E
<hr/>	
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1 kg
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500

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· **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**

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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**

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· **15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

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**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 eye 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@mgchemicals.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

ATA: 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.**