

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/19/2016

Reviewed on 04/19/2016

## 1 Identification

- **Product identifier**
- **Trade name:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A
- **Article number:** 12642-14 (A)
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Muta. 2 H341 Suspected of causing genetic defects.



GHS07

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

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07



GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
4,4'-Methylenebis(N,N-diglycidylaniline)
- **Hazard statements**  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.
- **Precautionary statements**  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Wear protective gloves.  
Contaminated work clothing must not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Specific treatment (see on this label).

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Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

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

IF ON SKIN: Wash with plenty of water.

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2

Fire = 1

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

7440-22-4	silver	50-100%
28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	25-50%

### 4 First-aid measures

· **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.

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

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

### 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **Special hazards arising from the substance or mixture** No further relevant information available.

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- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.
- **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

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **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:** None.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

7440-22-4 silver

PEL	Long-term value: 0.01 mg/m <sup>3</sup>
REL	Long-term value: 0.01 mg/m <sup>3</sup>
TLV	Long-term value: 0.1 mg/m <sup>3</sup> metal: dust and fume

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **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.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

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**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

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· **Protection of hands:**



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 protection:** Not required.

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

<b>Form:</b>	Pasty
<b>Color:</b>	Silver-colored
· <b>Odor:</b>	Mild
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** > 150 °C (> 302 °F)

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

· **Vapor pressure:** Not applicable.

<b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.

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- |   |   |
|---|---|
| <b>· Solubility in / Miscibility with Water:</b>  | <i>Insoluble.</i>                                 |
| <b>· Partition coefficient (n-octanol/water):</b> | <i>Not determined.</i>                            |
| <b>· Viscosity:</b>                               |   |
| <b>Dynamic:</b>                                   | <i>Not applicable.</i>                            |
| <b>Kinematic:</b>                                 | <i>Not applicable.</i>                            |
| <b>· Solvent content:</b>                         |   |
| <b>Organic solvents:</b>                          | <i>0.0 %</i>                                      |
| <b>VOC content:</b>                               | <i>0.0 g/l / 0.00 lb/gl</i>                       |
| <b>Solids content:</b>                            | <i>70.0 %</i>                                     |
| <b>· Other information</b>                        | <i>No further relevant information available.</i> |

## 10 Stability and reactivity

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

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** *No irritant effect.*
- **on the eye:** *No irritating effect.*
- **Sensitization:** *Sensitization possible through skin contact.*
- **Additional toxicological information:**  
*The product shows the following dangers according to internally approved calculation methods for preparations:*  
*Irritant*

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

*None of the ingredients is listed.*

- **NTP (National Toxicology Program)**

*None of the ingredients is listed.*

- **OSHA-Ca (Occupational Safety Health Administration)**

*None of the ingredients is listed.*

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*

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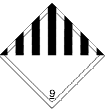
(Contd. of page 5)

- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*  
*Also poisonous for fish and plankton in water bodies.*  
*Very toxic for aquatic organisms*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |   |   |
|---|---|
| <b>UN-Number</b>  | UN3077  |
| <b>DOT, ADR, IMDG, IATA</b>   | UN3077  |
| <b>UN proper shipping name</b>  | Environmentally hazardous substances, solid, n.o.s.   |
| <b>DOT</b>  | 3077 Environmentally hazardous substances, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))             |
| <b>ADR</b>  | 3077 Environmentally hazardous substances, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))             |
| <b>IMDG</b>   | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT |
| <b>IATA</b>   | Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))                   |
| <b>Transport hazard class(es)</b>   |   |
| <b>DOT</b>  |   |
|  |   |
| <b>Class</b>  | 9 Miscellaneous dangerous substances and articles   |
| <b>Label</b>  | 9   |

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· ADR, IMDG, IATA



· Class 9 Miscellaneous dangerous substances and articles  
 · Label 9

· Packing group III  
 · DOT, ADR, IMDG, IATA

· Environmental hazards: Product contains environmentally hazardous substances: 4,4'-Methylenebis(N,N-diglycidylaniline)  
 · Marine pollutant: Symbol (fish and tree)  
 · Special marking (ADR): Symbol (fish and tree)  
 · Special marking (IATA): Symbol (fish and tree)

· Special precautions for user Warning: Miscellaneous dangerous substances and articles  
 · Danger code (Kemler): 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.

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· Transport/Additional information:

· ADR  
 · Excepted quantities (EQ) Code: E1  
 Maximum net quantity per inner packaging: 30 g  
 Maximum net quantity per outer packaging: 1000 g

· IMDG  
 · Limited quantities (LQ) 5L  
 · Excepted quantities (EQ) Code: E1  
 Maximum net quantity per inner packaging: 30 g  
 Maximum net quantity per outer packaging: 1000 g

· UN "Model Regulation": UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (4,4'-METHYLENEBIS(N,N-DIGLYCIDYLANILINE)), 9, III

## 15 Regulatory information

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

· Section 355 (extremely hazardous substances):

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):

7440-22-4 | silver

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

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· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

7440-22-4 silver

D

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**

4,4'-Methylenebis(N,N-diglycidylaniline)

· **Hazard statements**

May cause an allergic skin reaction.

Suspected of causing genetic defects.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves.

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

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Specific treatment (see on this label).

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

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

IF ON SKIN: Wash with plenty of water.

Store locked up.

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

· **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.*

· **Date of preparation / last revision** 04/19/2016 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

**TLV: Threshold Limit Value**

**PEL: Permissible Exposure Limit**

**REL: Recommended Exposure Limit**

**Skin Sens. 1: Sensitisation - Skin, Hazard Category 1**

**Muta. 2: Germ cell mutagenicity, Hazard Category 2**

US

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Revision: 19.04.2016

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

· **Product identifier**

· **Trade name:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A

· **Article number:** 12642-14 (A)

· **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.

· **Application of the substance / the mixture** Laboratory chemicals

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

· **Manufacturer/Supplier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: [info@emsdiasum.com](mailto:info@emsdiasum.com)

[www.emsdiasum.com](http://www.emsdiasum.com)

ProSciTech Pty Ltd

11 Carlton Street, Kirwan QLD 4817 Australia

Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)

Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)

Emgrid Australia Pty. Ltd.

P.O. Box 118

The Patch VIC 3792

Australia

Tel: 03 9752 1785

Fax: 03 9752 1784

Website: [www.emgrid.com.au](http://www.emgrid.com.au)

· **Further information obtainable from:** Product safety department

· **Emergency telephone number:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

## 2 Hazards identification

· **Classification of the substance or mixture**



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.



GHS07

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

· **Label elements**

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

(Contd. on page 2)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Revision: 19.04.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A

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## · Hazard pictograms



GHS07 GHS08

· Signal word *Warning*· **Hazard-determining components of labelling:**

4,4'-Methylenebis(N,N-diglycidylaniline)

· **Hazard statements***May cause an allergic skin reaction.**Suspected of causing genetic defects.*· **Precautionary statements***Avoid breathing dust/fume/gas/mist/vapours/spray.**Wear protective gloves.**Contaminated work clothing should not be allowed out of the workplace.**Obtain special instructions before use.**Do not handle until all safety precautions have been read and understood.**Specific treatment (see on this label).**Wash contaminated clothing before reuse.**IF exposed or concerned: Get medical advice/attention.**If skin irritation or rash occurs: Get medical advice/attention.**IF ON SKIN: Wash with plenty of water.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterisation: Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

7440-22-4	silver	50-100%
28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	25-50%

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

### 4 First aid measures

· **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.· **After swallowing:** If symptoms persist consult doctor.· **Information for doctor:**· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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according to 1907/2006/EC, Article 31

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

## 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.
- **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

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about fire - and explosion protection:** No special measures required.
- **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:** None.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

7440-22-4 silver
------------------

NES	Long-term value: 0.1 mg/m <sup>3</sup>
-----	--

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.

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## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Revision: 19.04.2016

**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

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*Immediately remove all soiled and contaminated clothing*

*Wash hands before breaks and at the end of work.*

**· 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.*

**· Protection of hands:**



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 protection:** Not required.

### 9 Physical and chemical properties

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

**· General Information**

**· Appearance:**

**Form:** Pasty

**Colour:** Silver-coloured

**· Odour:** Mild

**· Odour threshold:** Not determined.

**· pH-value:** Not applicable.

**· Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

**· Flash point:** > 150 °C

**· Flammability (solid, gaseous):** Not determined.

**· Ignition temperature:**

**Decomposition temperature:** Not determined.

**· Self-igniting:** Product is not selfigniting.

**· Danger of explosion:** Product does not present an explosion hazard.

**· Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

**· Vapour pressure:** Not applicable.

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**Safety data sheet**  
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· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>VOC (EC)</b>	0.00 %
· <b>Solids content:</b>	70.0 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

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

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Muta. 2

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

(Contd. on page 6)

AU

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Revision: 19.04.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A


(Contd. of page 5)

- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

· <b>UN-Number</b> · <b>ADG, IMDG, IATA</b>	UN3077
· <b>UN proper shipping name</b> · <b>ADG</b> · <b>IMDG</b> · <b>IATA</b>	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))
· <b>Transport hazard class(es)</b> · <b>ADG, IMDG, IATA</b>	
	
· <b>Class</b> · <b>Label</b>	9 Miscellaneous dangerous substances and articles. 9
· <b>Packing group</b> · <b>ADG, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	Product contains environmentally hazardous substances: 4,4'-Methylenebis(N,N-diglycidylaniline)

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Revision: 19.04.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A

(Contd. of page 6)

· <b>Marine pollutant:</b>	Symbol (fish and tree)
· <b>Special marking (ADG):</b>	Symbol (fish and tree)
· <b>Special marking (IATA):</b>	Symbol (fish and tree)
· <b>Special precautions for user</b>	Warning: Miscellaneous dangerous substances and articles.
· <b>Danger code (Kemler):</b>	90
· <b>EMS Number:</b>	F-A,S-F
· <b>Stowage Category</b>	A
· <b>Stowage Code</b>	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
-----	
· <b>ADG</b>	5 kg
· <b>Limited quantities (LQ)</b>	Code: E1
· <b>Excepted quantities (EQ)</b>	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· <b>Transport category</b>	3
· <b>Tunnel restriction code</b>	E
-----	
· <b>IMDG</b>	5L
· <b>Limited quantities (LQ)</b>	Code: E1
· <b>Excepted quantities (EQ)</b>	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· <b>UN "Model Regulation":</b>	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-METHYLENEBIS(N,N-DIGLYCIDYLANILINE)), 9, III

### 15 Regulatory information

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

· **Australian Inventory of Chemical Substances**

All ingredients are listed.

· **Standard for the Uniform Scheduling of Medicines and Poisons**

7440-22-4 | silver

S2

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** Warning

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

4,4'-Methylenebis(N,N-diglycidylaniline)

· **Hazard statements**

May cause an allergic skin reaction.

(Contd. on page 8)



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Revision: 19.04.2016

**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 7)

*Suspected of causing genetic defects.*

· **Precautionary statements**

*Avoid breathing dust/fume/gas/mist/vapours/spray.*

*Wear protective gloves.*

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

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Specific treatment (see on this label).*

*Wash contaminated clothing before reuse.*

*IF exposed or concerned: Get medical advice/attention.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*IF ON SKIN: Wash with plenty of water.*

*Store locked up.*

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

· **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

· **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.*

· **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport 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*

*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)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Skin Sens. 1: Sensitisation - Skin, Hazard Category 1*

*Muta. 2: Germ cell mutagenicity, Hazard Category 2*

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/19/2016

Reviewed on 04/19/2016

## 1 Identification

- **Product identifier**
- **Trade name:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A
- **Article number:** 12642-14 (A)
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Germ Cell Mutagenicity - Category 2 H341 Suspected of causing genetic defects.



GHS07

Skin Sensitizer - Category 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07



GHS08

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
4,4'-Methylenebis(N,N-diglycidylaniline)
- **Hazard statements**  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.
- **Precautionary statements**  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Contaminated work clothing should not be allowed out of the workplace.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Specific treatment (see on this label).

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

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**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 1)

*IF exposed or concerned: Get medical advice/attention.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*IF ON SKIN: Wash with plenty of water.*

*Take off contaminated clothing and wash it before reuse.*

*Store locked up.*

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

· **Hazard description:**

· **WHMIS-symbols:**

D2B - Toxic material causing other toxic effects



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

7440-22-4	silver	40-70% w/w
28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	15-40% w/w

### 4 First-aid measures

· **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.

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

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

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**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 2)

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

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.
- **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

- **Handling:**
- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **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:** None.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

7440-22-4 silver

EL	Short-term value: 0.03 mg/m <sup>3</sup> Long-term value: 0.01 mg/m <sup>3</sup> as Ag
----	--

EV	Long-term value: 0.1* 0.01** mg/m <sup>3</sup> *metal; **water-soluble compounds (as silver)
----	---

- **Additional information:** The lists that were valid during the creation were used as basis.

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Reviewed on 04/19/2016

**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 3)

- **Exposure controls**
- **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.
- **Breathing equipment:**  
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



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 protection:** Not required.

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

<b>Form:</b>	Pasty
<b>Color:</b>	Silver-colored
<b>Odor:</b>	Mild
<b>Odor threshold:</b>	Not determined.

· **pH-value:** Not applicable.

#### · Change in condition

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.

· **Flash point:** > 150 °C

· **Flammability (solid, gaseous):** Not determined.

#### · Ignition temperature:

**Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

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**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 4)

· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Solids content:</b>	70.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
- The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)**
- None of the ingredients is listed.
- **NTP (National Toxicology Program)**
- None of the ingredients is listed.

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# Safety Data Sheet

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**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 5)

· **OSHA-Ca (Occupational Safety Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
 Water hazard class 1 (Self-assessment): slightly hazardous for water  
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
 Also poisonous for fish and plankton in water bodies.  
 Very toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- |                                  |   |
|----------------------------------|---|
| · <b>UN-Number</b>               |   |
| · <b>DOT, TDG, IMDG, IATA</b>    | UN3077  |
| · <b>UN proper shipping name</b> |   |
| · <b>DOT</b>                     | Environmentally hazardous substances, solid, n.o.s.   |
| · <b>TDG</b>                     | 3077 Environmentally hazardous substances, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))             |
| · <b>IMDG</b>                    | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT |
| · <b>IATA</b>                    | Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))                   |

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**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 6)

· **Transport hazard class(es)**

· **DOT**



· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9

· **TDG, IMDG, IATA**



· **Class**

9 Miscellaneous dangerous substances and articles

· **Label**

9

· **Packing group**

· **DOT, TDG, IMDG, IATA**

III

· **Environmental hazards:**

Product contains environmentally hazardous substances: 4,4'-Methylenebis(N,N-diglycidylaniline)

· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (TDG):**

Symbol (fish and tree)

· **Special marking (IATA):**

Symbol (fish and tree)

· **Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

· **Danger code (Kemler):**

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.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **TDG**

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **UN "Model Regulation":**

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (4,4'-METHYLENEBIS(N,N-DIGLYCIDYLANILINE)), 9, III

CA

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**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 7)

## 15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

7440-22-4 | silver

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

7440-22-4 | silver

D

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

7440-22-4 | silver

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07    GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**

4,4'-Methylenebis(N,N-diglycidylaniline)

(Contd. on page 9)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 04/19/2016

Reviewed on 04/19/2016

**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 8)

- **Hazard statements**

*May cause an allergic skin reaction.*

*Suspected of causing genetic defects.*

- **Precautionary statements**

*Avoid breathing dust/fume/gas/mist/vapours/spray.*

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

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

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Specific treatment (see on this label).*

*IF exposed or concerned: Get medical advice/attention.*

*If skin irritation or rash occurs: Get medical advice/attention.*

*IF ON SKIN: Wash with plenty of water.*

*Take off contaminated clothing and wash it before reuse.*

*Store locked up.*

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

- **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.*

- **Date of preparation / last revision** 04/19/2016 / -

- **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*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)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*WHMIS: Workplace Hazardous Materials Information System (Canada)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety **Health***

***Skin Sensitizer - Category 1: Sensitisation - Skin, Hazard Category 1***

***Germ Cell Mutagenicity - Category 2: Germ cell mutagenicity, Hazard Category 2***

CA

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Revision: 19.04.2016

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

- **1.1 Product identifier**
- **Trade name:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A
- **Article number:** 12642-14 (A)
- **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** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SECTION 2: Hazards identification

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



GHS08 health hazard

Muta. 2                    H341 Suspected of causing genetic defects.



GHS09 environment

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 CLP regulation.
- **Hazard pictograms**



GHS07



GHS08



GHS09

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
4,4'-Methylenebis(N,N-diglycidylaniline)

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# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 19.04.2016

Revision: 19.04.2016

**Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Contd. of page 1)

- **Hazard statements**
  - H317 May cause an allergic skin reaction.
  - H341 Suspected of causing genetic defects.
  - H410 Very toxic to aquatic life with long lasting effects.
- **Precautionary statements**
  - P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P273 Avoid release to the environment.
  - P321 Specific treatment (see on this label).
  - 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.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7440-22-4	silver	50-100%
EINECS: 231-131-3	substance with a Community workplace exposure limit	
CAS: 28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	25-50%
	⚠ Aquatic Chronic 2, H411; ⚠ Skin Sens. 1B, H317	

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### SECTION 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.
- **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.

### 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** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

GB

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### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.
- **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** 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:** None.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

7440-22-4 silver
------------------

WEL	Long-term value: 0.1 mg/m <sup>3</sup>
-----	--

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **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.
- **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.
- **Protection of hands:**



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.

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*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 protection:** Not required.

### SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

**Form:** Pasty  
**Colour:** Silver-coloured

· **Odour:** Mild

· **Odour threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** Undetermined.

· **Flash point:** > 150 °C

· **Flammability (solid, gaseous):** Not determined.

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

· **Vapour pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapour density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with water:** Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

**Dynamic:** Not applicable.

**Kinematic:** Not applicable.

· **Solvent content:**

**Organic solvents:** 0.0 %

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<b>VOC (EC)</b>	0.00 %
<b>Solids content:</b>	70.0 %
<b>· 9.2 Other information</b>	No further relevant information available.

### SECTION 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.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**  
Suspected of causing genetic defects.
- **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.

### SECTION 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.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Also poisonous for fish and plankton in water bodies.  
Very toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

(Contd. on page 6)



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· 12.6 Other adverse effects No further relevant information available.

**SECTION 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.

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

**SECTION 14: Transport information**

· 14.1 UN-Number

· ADR, IMDG, IATA

UN3077

· 14.2 UN proper shipping name

· ADR

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline))

· IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE  
POLLUTANT

· IATA

Environmentally hazardous substance, solid, n.o.s. (4,4'-  
Methylenebis(N,N-diglycidylaniline))

· 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:

Product contains environmentally hazardous substances: 4,4'-  
Methylenebis(N,N-diglycidylaniline)

· 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.

· Danger code (Kemler):

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 Transport in bulk according to Annex II of  
Marpol and the IBC Code

Not applicable.

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

- **Limited quantities (LQ)** 5 kg
- **Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 1000 g
- **Transport category** 3
- **Tunnel restriction code** E

· **IMDG**

- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 1000 g

· **UN "Model Regulation":**

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-METHYLENE BIS(N,N-DIGLYCIDYLANILINE)), 9, III

### SECTION 15: Regulatory information

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

- H317 May cause an allergic skin reaction.
- H411 Toxic to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport 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)  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
 Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B  
 Muta. 2: Germ cell mutagenicity, Hazard Category 2  
 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1  
 Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 19.04.2016

Herziening van: 19.04.2016

## RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **1.1 Productidentificatie**
- **Handelsnaam:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A
- **Artikelnummer:** 12642-14 (A)
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**  
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Aurion**  
Binnenhaven 5  
6709 PD Wageningen  
The Netherlands  
Tel: 31 317 415094  
Fax: 31 317 415955  
email: [info@aurion.nl](mailto:info@aurion.nl)
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS08 gezondheidsgevaar

Muta. 2                      H341 Verdacht van het veroorzaken van genetische schade.



GHS09 milieu

Aquatic Chronic 1 H410 Zeer giftig voor in het water levende organismen, met langdurige gevolgen.



GHS07

Skin Sens. 1                      H317 Kan een allergische huidreactie veroorzaken.

- **2.2 Etiketteringselementen**
- **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**  
Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.

(Vervolg op blz. 2)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

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**Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Vervolg van blz. 1)

**· Gevarenpictogrammen**


GHS07 GHS08 GHS09

**· Signaalwoord Waarschuwing**
**· Gevaaraanduidende componenten voor de etikettering:**

4,4'-Methylenebis(N,N-diglycidylaniline)

**· Gevarenaanduidingen**

H317 Kan een allergische huidreactie veroorzaken.

H341 Verdacht van het veroorzaken van genetische schade.

H410 Zeer giftig voor in het water levende organismen, met langdurige gevolgen.

**· Veiligheidsaanbevelingen**

P261 Inademing van stof/rook/gas/nevel/damp/spuitnevel vermijden.

P280 Beschermende handschoenen/beschermende kleding/oogbescherming/gelaatsbescherming dragen.

P273 Voorkom lozing in het milieu.

P321 Specifieke behandeling vereist (zie op dit etiket).

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

**· 2.3 Andere gevaren**
**· Resultaten van PBT- en zPzB-beoordeling**
**· PBT:** Niet bruikbaar.

**· zPzB:** Niet bruikbaar.

### RUBRIEK 3: Samenstelling en informatie over de bestanddelen

**· 3.2 Chemische karakterisering: Mengsels**
**· Beschrijving:** Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

**· Gevaarlijke inhoudstoffen:**

CAS: 7440-22-4	zilver	50-100%
EINECS: 231-131-3	stof waarvoor binnen de Gemeenschap een blootstellingsgrens op de werkvloer geldt	
CAS: 28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	25-50%
	Aquatic Chronic 2, H411;  Skin Sens. 1B, H317	

**· Aanvullende gegevens:**

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

### RUBRIEK 4: Eerstehulpmaatregelen

**· 4.1 Beschrijving van de eerstehulpmaatregelen**
**· Na het inademen:**

Veel verse lucht toedienen en voor alle zekerheid een arts raadplegen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

**· Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.

**· Na oogcontact:** Ogen bij geopend ooglid meerdere minuten met stromend water spoelen

**· Na inslikken:** Als de klachten niet minderen, een arts raadplegen

**· 4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 3)

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## volgens 1907/2006/EG, Artikel 31

datum van de druk: 19.04.2016

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**Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Vervolg van blz. 2)

- **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**  
Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:** Brandblusmaatregelen op omgeving afstemmen.
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**  
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweerlieden**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

### RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures** Niet nodig.
- **6.2 Milieuvoorzorgsmaatregelen:**  
Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.  
Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 Insluitings- en reinigingsmethoden en -materiaal:** Besmet materiaal zoals afval volgens punt 13 verwijderen.
- **6.4 Verwijzing naar andere rubrieken**  
Informatie inzake veilig gebruik - zie hoofdstuk 7.  
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.  
Informatie inzake berging - zie hoofdstuk 13.

### RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**  
Bij een deskundig gebruik zijn geen bijzondere maatregelen vereist.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Geen bijzondere maatregelen noodzakelijk.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Geen.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **8.1 Controleparameters**

- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

7440-22-4 zilver

WGW	Lange termijn waarde: 0,1 mg/m <sup>3</sup>
-----	---

- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.

- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**  
Verwijderd houden van eet- en drinkwaren.

(Vervolg op blz. 4)

# Veiligheidsinformatieblad

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**Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Vervolg van blz. 3)

Verontreinigde kleding onmiddellijk uittrekken.

Vóór de pauze en aan het einde van werktijd handen wassen.

· **Ademhalingsbescherming:**

Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel gebruiken.

· **Handbescherming:**



Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.

Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

· **Handschoenmateriaal**

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

· **Doordringingstijd van het handschoenmateriaal**

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

· **Oogbescherming:** Niet noodzakelijk.

### RUBRIEK 9: Fysische en chemische eigenschappen

· **9.1 Informatie over fysische en chemische basiseigenschappen**

· **Algemene gegevens**

· **Voorkomen:**

**Vorm:** Pasteus

**Kleur:** Zilverkleurig

· **Reuk:** Mild

· **Geurdrempelwaarde:** Niet bepaald.

· **pH-waarde:** Niet bruikbaar.

· **Toestandsverandering**

**Smeltpunt/smeltbereik:** Niet bepaald.

**Kookpunt/kookpuntbereik:** Niet bepaald.

· **Vlampunt:** > 150 °C

· **Ontvlambaarheid (vast, gasvormig):** Niet bepaald.

· **Ontstekingstemperatuur:**

**Ontbindingstemperatuur:** Niet bepaald.

· **Zelfonsteking:** Het produkt ontbrandt niet uit zichzelf.

· **Ontploffingsgevaar:** Het produkt is niet ontploffingsgevaarlijk.

· **Ontploffingsgrenzen:**

**Onderste:** Niet bepaald.

**Bovenste:** Niet bepaald.

· **Dampspanning:** Niet bruikbaar.

(Vervolg op blz. 5)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 19.04.2016

Herziening van: 19.04.2016

**Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Vervolg van blz. 4)

<b>Dichtheid:</b>	Niet bepaald.
· <b>Relatieve dichtheid</b>	Niet bepaald.
· <b>Dampdichtheid</b>	Niet bruikbaar.
· <b>Verdampingsnelheid</b>	Niet bruikbaar.
· <b>Oplosbaarheid in/mengbaarheid met Water:</b>	Niet oplosbaar.
· <b>Verdelingscoëfficiënt (n-octanol/water):</b>	Niet bepaald.
· <b>Viscositeit</b>	
<b>Dynamisch:</b>	Niet bruikbaar.
<b>Kinematisch:</b>	Niet bruikbaar.
· <b>Oplosmiddelgehalte:</b>	
<b>Organisch oplosmiddel:</b>	0.0 %
<b>VOC (EG)</b>	0,00 %
· <b>Gehalte aan vaste bestanddelen:</b>	70.0 %
· <b>9.2 Overige informatie</b>	Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

### RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Ernstig oogletsel/oogirritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Sensibilisatie van de luchtwegen/de huid**  
Kan een allergische huidreactie veroorzaken.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen**  
Verdacht van het veroorzaken van genetische schade.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

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(Vervolg op blz. 6)



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## volgens 1907/2006/EG, Artikel 31

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Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A

(Vervolg van blz. 5)

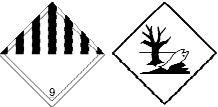
### RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Ecotoxische effecten:**
- **Opmerking:** Zeer giftig voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL) 1: Zwarte lijst-stof (76/464/EEG).  
Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein  
Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.  
In oppervlaktewater ook giftig voor vissen en plankton.  
zeer giftig voor in het water levende organismen
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terecht komen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

### RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.1 VN-nummer**
- **ADR, IMDG, IATA** UN3077
- **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**
- **ADR** 3077 MILIEUGEVAARLIJKE VASTE STOF, N.E.G. (4,4'-Methylenebis(N,N-diglycidylaniline))
- **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT
- **IATA** Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))
- **14.3 Transportgevaarenklasse(n)**
- **ADR, IMDG, IATA**
- 
- **klasse** 9 Diverse gevaarlijke stoffen en voorwerpen
- **Etiket** 9

(Vervolg op blz. 7)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 19.04.2016

Herziening van: 19.04.2016

**Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Vervolg van blz. 6)

<ul style="list-style-type: none"> <li>· <b>14.4 Verpakkingsgroep:</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	III
<ul style="list-style-type: none"> <li>· <b>14.5 Milieugevaren:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Bijzondere kenmerking (ADR):</b></li> <li>· <b>Bijzondere kenmerking (IATA):</b></li> </ul>	<p>Produkt bevat milieugevaarlijke stoffen: 4,4'-Methylenebis(N,N-diglycidylaniline)</p> <p>Symbool (vis en boom)</p> <p>Symbool (vis en boom)</p> <p>Symbool (vis en boom)</p>
<ul style="list-style-type: none"> <li>· <b>14.6 Bijzondere voorzorgen voor de gebruiker</b></li> <li>· <b>Kemler-getal:</b></li> <li>· <b>EMS-nummer:</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> </ul>	<p>Waarschuwing: Diverse gevaarlijke stoffen en voorwerpen</p> <p>90</p> <p>F-A,S-F</p> <p>A</p> <p>SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.</p>
<ul style="list-style-type: none"> <li>· <b>14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code</b></li> </ul>	Niet bruikbaar.
<ul style="list-style-type: none"> <li>· <b>Transport/verdere gegevens:</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Beperkte hoeveelheden (LQ)</b></li> <li>· <b>Uitgezonderde hoeveelheden (EQ)</b></li> </ul>	<p>5 kg</p> <p>Code: E1</p> <p>Grootste netto hoeveelheid per binnenverpakking: 30 g</p> <p>Grootste netto hoeveelheid per buitenverpakking: 1000 g</p>
<ul style="list-style-type: none"> <li>· <b>Vervoerscategorie</b></li> <li>· <b>Tunnelbeperkingscode</b></li> </ul>	<p>3</p> <p>E</p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>5L</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 g</p> <p>Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"> <li>· <b>VN "Model Regulation":</b></li> </ul>	<p>UN 3077 MILIEUGEVAARLIJKE VASTE STOF, N.E.G. (4,4'-METHYLENEBIS(N,N-DIGLYCIDYLANILINE)), 9, III</p>

### RUBRIEK 15: Regelgeving

· **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**

· **SZW-lijst van kankerverwekkende stoffen**

geen der bestanddelen staat op de lijst.

· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding**

geen der bestanddelen staat op de lijst.

(Vervolg op blz. 8)



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volgens 1907/2006/EG, Artikel 31

datum van de druk: 19.04.2016

Herziening van: 19.04.2016

**Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Vervolg van blz. 7)

- **Richtlijn 2012/18/EU**
- **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** geen der bestanddelen staat op de lijst.
- **Seveso-categorie E1** Gevaar voor het aquatisch milieu
- **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen 100 t**
- **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen 200 t**
- **Nationale voorschriften:**
- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 1: Saneringsinspanning A
- **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

### RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

- **Relevante zinnen**  
H317 Kan een allergische huidreactie veroorzaken.  
H411 Giftig voor in het water levende organismen, met langdurige gevolgen.
- **Afkortingen en acroniemen:**  
ADR: Accord européen sur le transport 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)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B  
Muta. 2: Germ cell mutagenicity, Hazard Category 2  
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

NL

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 19.04.2016

Révision: 19.04.2016

### RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A
- **Code du produit:** 12642-14 (A)
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**  
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS08 danger pour la santé

Muta. 2 H341 Susceptible d'induire des anomalies génétiques.



GHS09 environnement

Aquatic Chronic 1 H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.



GHS07

Skin Sens. 1 H317 Peut provoquer une allergie cutanée.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.
- **Pictogrammes de danger**



GHS07



GHS08



GHS09

- **Mention d'avertissement** Attention
- **Composants dangereux déterminants pour l'étiquetage:**  
4,4'-Méthylènebis(N,N-diglycidylaniline)

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## selon 1907/2006/CE, Article 31

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**Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(suite de la page 1)

· **Mentions de danger**

H317 Peut provoquer une allergie cutanée.

H341 Susceptible d'induire des anomalies génétiques.

H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.

· **Conseils de prudence**

P261 Éviter de respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols.

P280 Porter des gants de protection/des vêtements de protection/un équipement de protection des yeux/du visage.

P273 Éviter le rejet dans l'environnement.

P321 Traitement spécifique (voir sur cette étiquette).

P405 Garder sous clef.

P501 Éliminer le contenu/réceptacle conformément à la réglementation locale/régionale/nationale/internationale.

· **2.3 Autres dangers**

· **Résultats des évaluations PBT et vPvB**

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

### RUBRIQUE 3: Composition/informations sur les composants

· **3.2 Caractérisation chimique: Mélanges**

· **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

· **Composants dangereux:**

CAS: 7440-22-4	argent	50-100%
EINECS: 231-131-3	substance pour laquelle il existe, en vertu des dispositions communautaires, des limites d'exposition sur le lieu de travail	
CAS: 28768-32-3	4,4'-Méthylènebis(N,N-diglycidylaniline)	25-50%
	⚠ Aquatic Chronic 2, H411; ⚠ Skin Sens. 1B, H317	

· **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

### RUBRIQUE 4: Premiers secours

· **4.1 Description des premiers secours**

· **Après inhalation:**

Donner de l'air frais en abondance et consulter un médecin pour plus de sécurité.

En cas d'inconscience, coucher et transporter la personne en position latérale stable.

· **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.

· **Après contact avec les yeux:**

Rincer les yeux, sous l'eau courante, pendant plusieurs minutes, en écartant bien les paupières.

· **Après ingestion:** Si les troubles persistent, consulter un médecin.

· **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

· **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**

Pas d'autres informations importantes disponibles.

### RUBRIQUE 5: Mesures de lutte contre l'incendie

· **5.1 Moyens d'extinction**

· **Moyens d'extinction:** Adapter les mesures d'extinction d'incendie à l'environnement.

· **5.2 Dangers particuliers résultant de la substance ou du mélange**

Pas d'autres informations importantes disponibles.

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(suite de la page 2)

- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

### RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.
- **6.2 Précautions pour la protection de l'environnement:**  
En cas de pénétration dans les eaux ou les égouts, avvertir les autorités compétentes.  
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**  
Evacuer les matériaux contaminés en tant que déchets conformément au point 13.
- **6.4 Référence à d'autres rubriques**  
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.  
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.  
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

### RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**  
Aucune mesure particulière n'est nécessaire en cas de bonne utilisation.
- **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Néant.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

### RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**  
Sans autre indication, voir point 7.

#### · 8.1 Paramètres de contrôle

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

<b>7440-22-4 argent</b>
-------------------------

<b>VME</b>	Valeur à long terme: 0,1 mg/m <sup>3</sup>
------------	--

- **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

#### · 8.2 Contrôles de l'exposition

- **Équipement de protection individuel:**

- **Mesures générales de protection et d'hygiène:**

Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.

Retirer immédiatement les vêtements souillés ou humectés.

Se laver les mains avant les pauses et en fin de travail.

- **Protection respiratoire:**

En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.

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(suite de la page 3)

· **Protection des mains:**



Gants de protection

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.

À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

· **Matériau des gants**

Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

· **Temps de pénétration du matériau des gants**

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

· **Protection des yeux:** Pas nécessaire.

### RUBRIQUE 9: Propriétés physiques et chimiques

· **9.1 Informations sur les propriétés physiques et chimiques essentielles**

· **Indications générales**

· **Aspect:**

· **Forme:** Pâteuse

· **Couleur:** Argenté

· **Odeur:** Douce

· **Seuil olfactif:** Non déterminé.

· **valeur du pH:** Non applicable.

· **Changement d'état**

· **Point de fusion:** Non déterminé.

· **Point d'ébullition:** Non déterminé.

· **Point d'éclair** > 150 °C

· **Inflammabilité (solide, gazeux):** Non déterminé.

· **Température d'inflammation:**

· **Température de décomposition:** Non déterminé.

· **Auto-inflammation:** Le produit ne s'enflamme pas spontanément.

· **Danger d'explosion:** Le produit n'est pas explosif.

· **Limites d'explosion:**

· **Inférieure:** Non déterminé.

· **Supérieure:** Non déterminé.

· **Pression de vapeur:** Non applicable.

· **Densité:** Non déterminée.

· **Densité relative** Non déterminé.

· **Densité de vapeur.** Non applicable.

· **Vitesse d'évaporation** Non applicable.

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(suite de la page 4)

· <b>Solubilité dans/miscibilité avec l'eau:</b>	Insoluble
· <b>Coefficient de partage (n-octanol/eau):</b>	Non déterminé.
· <b>Viscosité:</b>	
<b>Dynamique:</b>	Non applicable.
<b>Cinématique:</b>	Non applicable.
· <b>Teneur en solvants:</b>	
<b>Solvants organiques:</b>	0.0 %
<b>VOC (CE)</b>	0,00 %
· <b>Teneur en substances solides:</b>	70.0 %
· <b>9.2 Autres informations</b>	Pas d'autres informations importantes disponibles.

### RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

### RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Lésions oculaires graves/irritation oculaire**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Sensibilisation respiratoire ou cutanée**  
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**  
Susceptible d'induire des anomalies génétiques.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

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# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

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**Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(suite de la page 5)


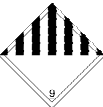
### RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Effets écotoxiques:**
- **Remarque:** Très toxique chez les poissons.
- **Autres indications écologiques:**
- **Indications générales:**  
*Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant*  
*Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.*  
*Dans les eaux, également toxique pour les poissons et le plancton.*  
*Très toxique pour organismes aquatiques.*
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

### RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.

### RUBRIQUE 14: Informations relatives au transport

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>14.1 Numéro ONU</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | UN3077  |
| <ul style="list-style-type: none"> <li>· <b>14.2 Désignation officielle de transport de l'ONU</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | 3077 MATIÈRE DANGEREUSE DU POINT DE VUE DE L'ENVIRONNEMENT, SOLIDE, N.S.A. (4,4'-Methylenebis(N,N-diglycidylaniline))<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT<br>Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline)) |
| <ul style="list-style-type: none"> <li>· <b>14.3 Classe(s) de danger pour le transport</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | <div style="display: flex; align-items: center; gap: 10px;">   </div>   |
| <ul style="list-style-type: none"> <li>· <b>Classe</b></li> </ul>  | 9 Matières et objets dangereux divers.  |

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· <b>Étiquette</b>	9
· <b>14.4 Groupe d'emballage</b> · <b>ADR, IMDG, IATA</b>	III
· <b>14.5 Dangers pour l'environnement:</b>  · <b>Marine Pollutant:</b> · <b>Marquage spécial (ADR):</b> · <b>Marquage spécial (IATA):</b>	<i>Le produit contient matières dangereuses pour l'environnement : 4,4'-Methylenebis(N,N-diglycidylaniline)</i> <i>Signe conventionnel (poisson et arbre)</i> <i>Signe conventionnel (poisson et arbre)</i> <i>Signe conventionnel (poisson et arbre)</i>
· <b>14.6 Précautions particulières à prendre par l'utilisateur</b> · <b>Indice Kemler:</b> · <b>No EMS:</b> · <b>Stowage Category</b> · <b>Stowage Code</b>	<i>Attention: Matières et objets dangereux divers.</i> 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· <b>14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC</b>	<i>Non applicable.</i>
· <b>Indications complémentaires de transport:</b>	
· <b>ADR</b> · <b>Quantités limitées (LQ)</b> · <b>Quantités exceptées (EQ)</b>	5 kg Code: E1 Quantité maximale nette par emballage intérieur: 30 g Quantité maximale nette par emballage extérieur: 1000
· <b>Catégorie de transport</b> · <b>Code de restriction en tunnels</b>	8 3 E
· <b>IMDG</b> · <b>Limited quantities (LQ)</b> · <b>Excepted quantities (EQ)</b>	5L Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· <b>"Règlement type" de l'ONU:</b>	UN 3077 MATIÈRE DANGEREUSE DU POINT DE VUE DE L'ENVIRONNEMENT, SOLIDE, N.S.A. (4,4'-METHYLENEBIS(N,N-DIGLYCIDYLANILINE)), 9, III

### **RUBRIQUE 15: Informations relatives à la réglementation**

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** Aucun des composants n'est compris.
- **Catégorie SEVESO E1** Danger pour l'environnement aquatique
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas** 100 t
- **Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut** 200 t

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**· 15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.**RUBRIQUE 16: Autres informations**

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

**· Phrases importantes**

H317 Peut provoquer une allergie cutanée.

H411 Toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.

**· Acronymes et abréviations:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

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)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

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überarbeitet am: 19.04.2016

### ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A
- **Artikelnummer:** 12642-14 (A)
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**  
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com  
  
Science Services GmbH  
Unterhachinger Str. 75  
81737 München Germany  
Tel: +49(0)89 18 93 668-0  
safety@scienceservices.de  
  
24h Giftnotruf Munchen: +49 (0)89 19240  
Toxikologische Abteilung der II. Medizinischen Klinik  
rechts der Isar, Munchen. - www.toxinfo.org
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS08 Gesundheitsgefahr

Muta. 2

H341 Kann vermutlich genetische Defekte verursachen.



GHS09 Umwelt

Aquatic Chronic 1 H410 Sehr giftig für Wasserorganismen mit langfristiger Wirkung.



GHS07

Skin Sens. 1

H317 Kann allergische Hautreaktionen verursachen.

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(Fortsetzung von Seite 1)

- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**  
Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.
- **Gefahrenpiktogramme**



GHS07   GHS08   GHS09

- **Signalwort** Achtung
- **Gefahrbestimmende Komponenten zur Etikettierung:**  
4,4'-Methylenebis(N,N-diglycidylaniline)
- **Gefahrenhinweise**  
H317 Kann allergische Hautreaktionen verursachen.  
H341 Kann vermutlich genetische Defekte verursachen.  
H410 Sehr giftig für Wasserorganismen mit langfristiger Wirkung.
- **Sicherheitshinweise**  
P261 Einatmen von Staub/Rauch/Gas/Nebel/Dampf/Aerosol vermeiden.  
P280 Schutzhandschuhe/Schutzkleidung/Augenschutz/Gesichtsschutz tragen.  
P273 Freisetzung in die Umwelt vermeiden.  
P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).  
P405 Unter Verschluss aufbewahren.  
P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen/ internationalen Vorschriften.
- **2.3 Sonstige Gefahren**
- **Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

### ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

- **3.2 Chemische Charakterisierung: Gemische**
- **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

- **Gefährliche Inhaltsstoffe:**

CAS: 7440-22-4 EINECS: 231-131-3	Silber Stoff, für den ein gemeinschaftlicher Grenzwert für die Exposition am Arbeitsplatz gilt	50-100%
CAS: 28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline) Aquatic Chronic 2, H411;  Skin Sens. 1B, H317	25-50%

- **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

- **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**
- **Nach Einatmen:**  
Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.  
Bei Bewußtlosigkeit Lagerung und Transport in stabiler Seitenlage.
- **Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.
- **Nach Augenkontakt:** Augen bei geöffnetem Lidspalt mehrere Minuten mit fließendem Wasser spülen.

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- **Nach Verschlucken:** Bei anhaltenden Beschwerden Arzt konsultieren.
- **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**  
Keine weiteren relevanten Informationen verfügbar.
- **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**  
Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:** Feuerlöschmaßnahmen auf die Umgebung abstimmen.
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**  
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**  
Nicht erforderlich.
- **6.2 Umweltschutzmaßnahmen:**  
Bei Eindringen in Gewässer oder Kanalisation zuständige Behörden benachrichtigen.  
Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**  
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
- **6.4 Verweis auf andere Abschnitte**  
Informationen zur sicheren Handhabung siehe Abschnitt 7.  
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.  
Informationen zur Entsorgung siehe Abschnitt 13.

### ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**  
Bei sachgemäßer Verwendung keine besonderen Maßnahmen erforderlich.
- **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Keine.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.

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### · 8.1 Zu überwachende Parameter

#### · Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:

**7440-22-4 Silber**

AGW	Langzeitwert: 0,1 E mg/m <sup>3</sup> 8(II);DFG, EU
-----	--

· **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

### · 8.2 Begrenzung und Überwachung der Exposition

#### · Persönliche Schutzausrüstung:

#### · Allgemeine Schutz- und Hygienemaßnahmen:

Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

Beschmutzte, getränkte Kleidung sofort ausziehen.

Vor den Pausen und bei Arbeitsende Hände waschen.

#### · Atemschutz:

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.

#### · Handschutz:



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

#### · Handschuhmaterial

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

#### · Durchdringungszeit des Handschuhmaterials

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

#### · Augenschutz: Nicht erforderlich.

## ABSCHNITT 9: Physikalische und chemische Eigenschaften

### · 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

#### · Allgemeine Angaben

#### · Aussehen:

**Form:** Pastös

**Farbe:** Silberfarben

· **Geruch:** Mild

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht anwendbar.

#### · Zustandsänderung

**Schmelzpunkt/Schmelzbereich:** Nicht bestimmt.

**Siedepunkt/Siedebereich:** Nicht bestimmt.

· **Flammpunkt:** > 150 °C

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· <b>Entzündlichkeit (fest, gasförmig):</b>	Nicht bestimmt.
· <b>Zündtemperatur:</b>	
<b>Zersetzungstemperatur:</b>	Nicht bestimmt.
· <b>Selbstentzündlichkeit:</b>	Das Produkt ist nicht selbstentzündlich.
· <b>Explosionsgefahr:</b>	Das Produkt ist nicht explosionsgefährlich.
· <b>Explosionsgrenzen:</b>	
<b>Untere:</b>	Nicht bestimmt.
<b>Obere:</b>	Nicht bestimmt.
· <b>Dampfdruck:</b>	Nicht anwendbar.
· <b>Dichte:</b>	Nicht bestimmt.
· <b>Relative Dichte</b>	Nicht bestimmt.
· <b>Dampfdichte</b>	Nicht anwendbar.
· <b>Verdampfungsgeschwindigkeit</b>	Nicht anwendbar.
· <b>Löslichkeit in / Mischbarkeit mit Wasser:</b>	Unlöslich.
· <b>Verteilungskoeffizient (n-Octanol/Wasser):</b>	Nicht bestimmt.
· <b>Viskosität:</b>	
<b>Dynamisch:</b>	Nicht anwendbar.
<b>Kinematisch:</b>	Nicht anwendbar.
· <b>Lösemittelgehalt:</b>	
<b>Organische Lösemittel:</b>	0.0 %
<b>VOC (EU)</b>	0,00 %
<b>Festkörpergehalt:</b>	70.0 %
· <b>9.2 Sonstige Angaben</b>	Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**  
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

### ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Schwere Augenschädigung/-reizung** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Sensibilisierung der Atemwege/Haut**  
Kann allergische Hautreaktionen verursachen.

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- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität**  
Kann vermutlich genetische Defekte verursachen.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**  
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**  
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

### ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Ökotoxische Wirkungen:**
- **Bemerkung:** Sehr giftig für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**  
Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend  
Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.  
In Gewässern auch giftig für Fische und Plankton.  
sehr giftig für Wasserorganismen
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

### ABSCHNITT 14: Angaben zum Transport

- |  |   |
|--|---|
| · <b>14.1 UN-Nummer</b>                            |   |
| · <b>ADR, IMDG, IATA</b>                           | UN3077  |
| · <b>14.2 Ordnungsgemäße UN-Versandbezeichnung</b> |   |
| · <b>ADR</b>                                       | 3077 UMWELTGEFÄHRDENDER STOFF, FEST, N.A.G.<br>(4,4'-Methylenebis(N,N-diglycidylaniline)) |

(Fortsetzung auf Seite 7)



# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

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überarbeitet am: 19.04.2016

**Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

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· <b>IMDG</b>	<b>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT</b>
· <b>IATA</b>	<b>Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))</b>

- **14.3 Transportgefahrenklassen**
- **ADR, IMDG, IATA**



- **Klasse** 9 Verschiedene gefährliche Stoffe und Gegenstände
- **Gefahrzettel** 9

- **14.4 Verpackungsgruppe**
- **ADR, IMDG, IATA** III

- **14.5 Umweltgefahren:** Das Produkt enthält umweltgefährdende Stoffe: 4,4'-Methylenebis(N,N-diglycidylaniline)
- **Marine pollutant:** Symbol (Fisch und Baum)
- **Besondere Kennzeichnung (ADR):** Symbol (Fisch und Baum)
- **Besondere Kennzeichnung (IATA):** Symbol (Fisch und Baum)

- **14.6 Besondere Vorsichtsmaßnahmen für den Verwender** Achtung: Verschiedene gefährliche Stoffe und Gegenstände
- **Kemler-Zahl:** 90
- **EMS-Nummer:** 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 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code** Nicht anwendbar.

- **Transport/weitere Angaben:**

- **ADR**
- **Begrenzte Menge (LQ)** 5 kg
- **Freigestellte Mengen (EQ)** Code: E1  
Höchste Nettomenge je Innenverpackung: 30 g  
Höchste Nettomenge je Außenverpackung: 1000 g
- **Beförderungskategorie** 3
- **Tunnelbeschränkungscode** E

- **IMDG**
- **Limited quantities (LQ)** 5L
- **Excepted quantities (EQ)** Code: E1  
Maximum net quantity per inner packaging: 30 g  
Maximum net quantity per outer packaging: 1000 g

- **UN "Model Regulation":** UN 3077 UMWELTGEFÄHRDENDER STOFF, FEST, N. A. G. (4,4'-METHYLENEBIS(N,N-DIGLYCIDYLANILINE)), 9, III

DE

(Fortsetzung auf Seite 8)



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### ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- Richtlinie 2012/18/EU
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Keiner der Inhaltsstoffe ist enthalten.
- **Seveso-Kategorie E1** Gewässergefährdend
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 100 t**
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse 200 t**
- **Nationale Vorschriften:**
- **Wassergefährdungsklasse: WGK 1 (Selbsteinstufung):** schwach wassergefährdend.
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

### ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Relevante Sätze**
- H317 Kann allergische Hautreaktionen verursachen.
- H411 Giftig für Wasserorganismen, mit langfristiger Wirkung.
- **Abkürzungen und Akronyme:**
- ADR: Accord européen sur le transport 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)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B
- Muta. 2: Germ cell mutagenicity, Hazard Category 2
- Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

DE

**Scheda di dati di sicurezza**  
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### SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A

· **Articolo numero:** 12642-14 (A)

· **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**

Non sono disponibili altre informazioni.

· **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio

· **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: [info@emsdiasum.com](mailto:info@emsdiasum.com)

[www.emsdiasum.com](http://www.emsdiasum.com)

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: [www.sichim.com](http://www.sichim.com)

· **Informazioni fornite da:** Product safety department

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

### SEZIONE 2: Identificazione dei pericoli

· **2.1 Classificazione della sostanza o della miscela**

· **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS08 pericolo per la salute

Muta. 2

H341 Sospettato di provocare alterazioni genetiche.



GHS09 ambiente

Aquatic Chronic 1 H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.



GHS07

Skin Sens. 1

H317 Può provocare una reazione allergica cutanea.

· **2.2 Elementi dell'etichetta**

· **Etichettatura secondo il regolamento (CE) n. 1272/2008**

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

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· **Pittogrammi di pericolo**



GHS07 GHS08 GHS09

· **Avvertenza** *Attenzione*

· **Componenti pericolosi che ne determinano l'etichettatura:**

4,4'-Methylenebis(N,N-diglycidylaniline)

· **Indicazioni di pericolo**

H317 Può provocare una reazione allergica cutanea.

H341 Sospettato di provocare alterazioni genetiche.

H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.

· **Consigli di prudenza**

P261 Evitare di respirare la polvere/i fumi/i gas/la nebbia/i vapori/gli aerosol.

P280 Indossare guanti/indumenti protettivi/Proteggere gli occhi/il viso.

P273 Non disperdere nell'ambiente.

P321 Trattamento specifico (vedere su questa etichetta).

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

### SEZIONE 3: Composizione/informazioni sugli ingredienti

· **3.2 Caratteristiche chimiche: Miscela**

· **Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.

· **Sostanze pericolose:**

CAS: 7440-22-4	argento	50-100%
EINECS: 231-131-3	sostanza con un limite comunitario di esposizione sul posto di lavoro	
CAS: 28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	25-50%
	⚠ Aquatic Chronic 2, H411; ⚠ Skin Sens. 1B, H317	

· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

### SEZIONE 4: Misure di primo soccorso

· **4.1 Descrizione delle misure di primo soccorso**

· **Inalazione:**

Portare il soggetto in zona molto ben areata e per sicurezza consultare un medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

· **Contatto con la pelle:** Lavare immediatamente con acqua e sapone sciacquando accuratamente.

· **Contatto con gli occhi:** Lavare con acqua corrente per alcuni minuti tenendo le palpebre ben aperte.

· **Ingestione:** Se il dolore persiste consultare il medico.

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.

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- **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**  
Non sono disponibili altre informazioni.

### SEZIONE 5: Misure antincendio

- **5.1 Mezzi di estinzione**
- **Mezzi di estinzione idonei:** Adottare provvedimenti antiincendio nei dintorni della zona colpita.
- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.

### SEZIONE 6: Misure in caso di rilascio accidentale

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** Non necessario.
- **6.2 Precauzioni ambientali:**  
In caso di infiltrazione nei corpi d'acqua o nelle fognature avvertire le autorità competenti.  
Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**  
Smaltimento del materiale contaminato conformemente al punto 13.
- **6.4 Riferimento ad altre sezioni**  
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.  
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.  
Per informazioni relative allo smaltimento vedere Capitolo 13.

### SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura** Per un uso corretto non sono necessari provvedimenti particolari.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Nessuno.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

### SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.
- **8.1 Parametri di controllo**

· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

**7440-22-4 argento**

TWA	Valore a lungo termine: 0,01* 0,1** mg/m <sup>3</sup> *sali solubili (come Ag) **metallo, polvere e fumi
VL	Valore a lungo termine: 0,1 mg/m <sup>3</sup>

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

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- **8.2 Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**  
Tenere lontano da cibo, bevande e foraggi.  
Togliere immediatamente gli abiti contaminati.  
Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- **Maschera protettiva:**  
Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.
- **Guanti protettivi:**



Guanti protettivi

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione. A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche. Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

- **Materiale dei guanti**  
La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego
- **Tempo di permeazione del materiale dei guanti**  
Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.
- **Occhiali protettivi:** Non necessario.

## SEZIONE 9: Proprietà fisiche e chimiche

### · 9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali

#### · Indicazioni generali

##### · Aspetto:

· <b>Forma:</b>	Pastoso
· <b>Colore:</b>	Color argento
· <b>Odore:</b>	Delicato
· <b>Soglia olfattiva:</b>	Non definito.

· **valori di pH:** Non applicabile.

#### · Cambiamento di stato

· <b>Temperatura di fusione/ambito di fusione:</b>	Non definito.
· <b>Temperatura di ebollizione/ambito di ebollizione:</b>	Non definito.

· **Punto di infiammabilità:** > 150 °C

· **Infiammabilità (solido, gassoso):** Non definito.

#### · Temperatura di accensione:

· **Temperatura di decomposizione:** Non definito.

· **Autoaccensione:** Prodotto non autoinfiammabile.

· **Pericolo di esplosione:** Prodotto non esplosivo.

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· <b>Limiti di infiammabilità:</b>	
<b>Inferiore:</b>	Non definito.
<b>Superiore:</b>	Non definito.
· <b>Tensione di vapore:</b>	Non applicabile.
· <b>Densità:</b>	Non definito.
· <b>Densità relativa</b>	Non definito.
· <b>Densità del vapore</b>	Non applicabile.
· <b>Velocità di evaporazione</b>	Non applicabile.
· <b>Solubilità in/Miscibilità con acqua:</b>	Insolubile.
· <b>Coefficiente di distribuzione (n-Octanol/acqua):</b>	Non definito.
· <b>Viscosità:</b>	
<b>Dinamica:</b>	Non applicabile.
<b>Cinematica:</b>	Non applicabile.
· <b>Tenore del solvente:</b>	
<b>Solventi organici:</b>	0.0 %
<b>VOC (CE)</b>	0,00 %
<b>Contenuto solido:</b>	70.0 %
· <b>9.2 Altre informazioni</b>	Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

- **10.1 Reattività** Non sono disponibili altre informazioni.
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

### SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Lesioni oculari gravi/irritazioni oculari gravi**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Sensibilizzazione respiratoria o cutanea**  
Può provocare una reazione allergica cutanea.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**  
Sospettato di provocare alterazioni genetiche.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

### SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Effetti tossici per l'ambiente:**
- **Osservazioni:** Molto tossico per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso  
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.  
Tossico per pesci e plancton.  
Molto tossico per gli organismi acquatici
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

### SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.

### SEZIONE 14: Informazioni sul trasporto

- |   |   |
|---|---|
| · <b>14.1 Numero ONU</b>                  |   |
| · <b>ADR, IMDG, IATA</b>                  | UN3077  |
| · <b>14.2 Nome di spedizione dell'ONU</b> |   |
| · <b>ADR</b>                              | 3077 MATERIA PERICOLOSA PER L'AMBIENTE, SOLIDA, N.A.S. (4,4'-Methylenebis(N,N-diglycidylaniline))               |
| · <b>IMDG</b>                             | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT |
| · <b>IATA</b>                             | Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))                   |

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**Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Segue da pagina 6)

<ul style="list-style-type: none"> <li>· <b>14.3 Classi di pericolo connesso al trasporto</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	
	
<ul style="list-style-type: none"> <li>· <b>Classe</b></li> <li>· <b>Etichetta</b></li> </ul>	<p>9 Materie ed oggetti pericolosi diversi 9</p>
<ul style="list-style-type: none"> <li>· <b>14.4 Gruppo di imballaggio</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	<p>III</p>
<ul style="list-style-type: none"> <li>· <b>14.5 Pericoli per l'ambiente:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Marcatatura speciali (ADR):</b></li> <li>· <b>Marcatatura speciali (IATA):</b></li> </ul>	<p>Il prodotto contiene materie pericolose per l'ambiente: 4,4'-Methylenebis(N,N-diglycidylaniline) Simbolo (pesce e albero) Simbolo (pesce e albero) Simbolo (pesce e albero)</p>
<ul style="list-style-type: none"> <li>· <b>14.6 Precauzioni speciali per gli utilizzatori</b></li> <li>· <b>Numero Kemler:</b></li> <li>· <b>Numero EMS:</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> </ul>	<p>Attenzione: Materie ed oggetti pericolosi diversi 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.</p>
<ul style="list-style-type: none"> <li>· <b>14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC</b></li> </ul>	<p>Non applicabile.</p>
<ul style="list-style-type: none"> <li>· <b>Trasporto/ulteriori indicazioni:</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Quantità limitate (LQ)</b></li> <li>· <b>Quantità esenti (EQ)</b></li> </ul>	<p>5 kg Codice: E1 Quantità massima netta per imballaggio interno: 30 g Quantità massima netta per imballaggio esterno: 1000 g</p>
<ul style="list-style-type: none"> <li>· <b>Categoria di trasporto</b></li> <li>· <b>Codice di restrizione in galleria</b></li> </ul>	<p>3 E</p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>5L Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>UN 3077 MATERIA PERICOLOSA PER L'AMBIENTE, SOLIDA, N.A.S. (4,4'-METHYLENEBIS(N,N-DIGLYCIDYLANILINE)), 9, III</p>

### SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.

(continua a pagina 8)



**Scheda di dati di sicurezza**  
**ai sensi del regolamento 1907/2006/CE, Articolo 31**

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Revisione: 19.04.2016

**Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Segue da pagina 7)

- **Categoria Seveso E1** Pericoloso per l'ambiente acquatico
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore 100 t**
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore 200 t**
- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

### **SEZIONE 16: Altre informazioni**

*I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.*

· **Frasi rilevanti**

*H317 Può provocare una reazione allergica cutanea.*

*H411 Tossico per gli organismi acquatici con effetti di lunga durata.*

· **Abbreviazioni e acronimi:**

*ADR: Accord européen sur le transport 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)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Skin Sens. 1: Sensitisation - Skin, Hazard Category 1*

*Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B*

*Muta. 2: Germ cell mutagenicity, Hazard Category 2*

*Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1*

*Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2*

# 안전지침서

## 제조조의와 2006/E에 따라라따

기압점: 2016.04.19

개정: 2016.04.19

### 1 화학제품과 회사에 관한 정보

제품제품제자

· **제품명:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A

· **상품번호:** 12642-14 (A)

해당해당해당질이나 혼합물과관련해관용도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.

· **제품의 권고 용도와 사용 제한**에 대한 제한사항 실 화 학 품

· **안전데이터표(Safety Data Sheet)내 공급업체 관련 정보**

· **제조자/수입자/유통업체 정보**

Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com

Samchang Commercial Co., Ltd.  
Yeo Eui Do  
PO Box 1110  
Seoul, Korea  
Tel: 82 2 703 3040  
Fax: 82 2 717 3298

· **추가적인 정보**에 대한 문의는 conduct safety department

· **비상연락 전화번호:**

ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 유해성.위험성

· **순물질 또는 혼합물**에 분류분류



건강에 위험

생식세포 변이원성 구분2 H341 유전적인 결함을 일으킬 것으로 의심됨



환경

수생환경유해성-만성 구분1 H410 장기적인 영향에 의해 수생생물에게 매우 유독함



피부과민성 구분1 H317 알레르기성 피부 반응을 일으킬 수 있음

· **라벨 표기 요소**

· **라벨 라벨 요소**

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

(2 쪽에 계속)





# 안전지침서

## 제조조의와 2006/EL에 따라라따

기압점: 2016.04.19

개정: 2016.04.19

**제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(3 쪽부터계속)

노출 통제 통제  
개인개인 보호구

**· 일반적보호조치및위생조치:**

- 식료품, 음료수와 사료로부터 멀리떨어뜨려 놓는다.
- 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
- 휴식전이나 작업이 끝날때마다 손을 씻는다.

**· 호흡기보호보호**

- 단시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

**· 눈보호보호**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.  
테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.  
투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

**· 장갑의재료**

- 적합한장갑의선택은재질차이뿐만아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도 다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전예측되어질수있는것아니고, 반드시사용전에 (그안전성이) 체크되어져야한다.

- 장갑재료의 투과시간 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.
- 눈보호보호필요 없음.

### 9 물리화학적 특성

기본 물리화학적 특성에 대한 정보

· 일반정보  
외형외형외형

<b>물리적상태</b>	부품은
<b>색:</b>	은색
<b>냄새</b>	부드러운
<b>· 후각역치</b>	알맞지않다.

· pH: 해당사항 없음.

· 상태변화  
**녹는점/어는점:** 맞지않는  
**초기초기 녹는 점과 끓는점** 범위범위 맞지않는

· 인화점: > 150 °C

· 인화성 고체기체기체 알맞지않다.

· 점화온도:

분해온도 알맞지않다.

· 자기점화: 이제품은자연발화성이없다.

· 폭발위험: 이제품은폭발위험성이없다

인화 인화 인화 폭발 위험성 상한하한

**아래로:** 알맞지않다.  
**위로위로위로** 알맞지않다.

(5 쪽에계속)

# 안전지침서

## 제조의와 2006/ED에 따라라따

기압점: 2016.04.19

개정: 2016.04.19

**제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(4 쪽부터계속)

· <b>증기압:</b>	해당사항 없음.
밀도밀도밀도	맞지않는다.
비중비중비중	알맞지않다.
· <b>증기밀도:</b>	해당사항 없음.
증발 증발 증발 속도	해당사항 없음.
· <b>용해도:</b>	
· <b>물:</b>	불용해성의
· <b>n 옥탄올/물 분배계수:</b>	알맞지않다.
점도점도점도	
· <b>역학성:</b>	해당사항 없음.
· <b>동점성:</b>	해당사항 없음.
· <b>용매내용물</b>	
· <b>유기용매:</b>	0.0 %
· <b>VOC (EU)</b>	0.00 %
· <b>고체양함량함량</b>	70.0 %
기타 정보 정보	추가적인 정보가 존재하지 않습니다.

### 10 안정성 및 반응성

- **반응성** 추가적인 정보가 존재하지 않습니다.
- **화학적 안정성**
- **화학적 안정성 유해 반응의 가능성 / 피해 야할 조건 조건** 정에 따라 사용 할 경우 해체는 없다
- **유해 반응 가능성** 위험한 반응으로는 알려지지 않았다.
- **피해 야할 조건 조건** 추가적인 정보가 존재하지 않습니다.
- **혼합 혼합 혼합 물질 물질** 추가적인 정보가 존재하지 않습니다.
- **유해 분해 물질:** 위험성 있는 분해 물질은 알려지지 않았다.

### 11 독성에 관한 정보

- **독성학적 영향에 대한 정보**
- 급성 급성 독성 독성
- **일차적 자극 효과**
- 피부 피부 부 자극 또는 자극 성: 무자극
- 심한 심한 부 자극 또는 자극 성: 무자극.
- **감각화:** 피부 접촉을 통하여 감각화 가능성이 있다.
- **추 가 적 인 독 성 에 관 한 정보**
- 이제 품은 유럽 공동체의 공동 분류 원칙의 합법적인 절차에 근거하여 최근에 발효된 원고에서 아래 위험들의 사전 준비에 대하여 제시하고 있다.
- 자극적인
- 다음 다음 독성의 잠재적인 효과에 대한 정보
- **CMR 효과 유발, 유발, 유발 변이성 그리고 생식 독성**
- 생식세포 변이원성 구분2

### 12 환경에 미치는 영향

- 독성 독성 독성
- **수생 독성:** 추가적인 정보가 존재하지 않습니다.

(6 쪽에 계속)

# 안전지침서

## 제조조의와 2006/EL에 따라라따

기압점: 2016.04.19

개정: 2016.04.19

**제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(5 쪽부터계속)

- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **생태독성:**

의견의견의견류 에 매우 독성임  
· **추가적인 생태학 정보정보**

일반 **물질을 특징징**

수질오염등급 1 (자체등급분류): 약하게수질오염이된  
회석시키지않은채대량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.  
하천에서는역시물고기나플랑크톤게는독성이있다.  
물속의유기체에아주독이되는것

- PBT(잔류성, 생물농축성, 독성물질) 및 vPvB(고 잔류성, 고 생물농축성, 독성물질)에 해당하지 않음
  - PBT(잔류성, 생물농축성, 독성물질) 물질에 해당하지 않음.
  - vPvB(고 잔류성, 고 생물농축성, 독성물질) 물질에 해당하지 않음.
- 기타기타 **부작용** 추가적인 정보가 존재하지 않습니다.

### 13 폐기시 주의사항

- **폐기물 처리 방법**  
권고 권고 **생물** 쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- **비위생적 포장포장**  
권고 권고 **당류** 의지침에입각한쓰레기처리.

### 14 운송에 필요한 정보

유엔 **위험물** 번호

- ADR, IMDG, IATA UN3077

· **정정적정정명**

· ADR 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline))

· IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT

· IATA Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))

교통 **위험물** 라벨

- ADR, IMDG, IATA



등급 **위험물**

- **위험물** 라벨라벨

9 여러모로위험한물 질과물체  
9

· **용기등급**

- ADR, IMDG, IATA III

(7 쪽에계속)



# 안전지침서

## 제조조의와 2006/EC에 따라라따

기압점: 2016.04.19

개정: 2016.04.19

**제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(6 쪽부터계속)

<ul style="list-style-type: none"> <li>· <b>환경적 유해물질:</b></li> <li>· <b>해양오염물질:</b></li> <li>· <b>특수 화학물질(수용액):</b></li> <li>· <b>특수 화학물질(고체):</b></li> </ul>	<p>이물질은환경오염물질을함유하고있다 : 4 , 4 ' - Methylenebis(N,N-diglycidylaniline)</p> <p>심벌 (물고기와 나무)</p> <p>심벌 (물고기와 나무)</p> <p>심벌 (물고기와 나무)</p>
<ul style="list-style-type: none"> <li>· <b>이동시특별 취급조치</b></li> <li>· <b>위험물질코드</b></li> <li>· <b>UN번호</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> </ul>	<p>경고: 여러모로위험한물질과물체</p> <p>90</p> <p>F-A,S-F</p> <p>A</p> <p>SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.</p>
<ul style="list-style-type: none"> <li>· <b>MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따라</b></li> </ul>	<p>해당사항 없음.</p>
<p>· <b>운송/추가정보</b></p>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>한정수량(제한)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>5 kg</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 g</p> <p>Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"> <li>· <b>운송분류구분</b></li> <li>· <b>터널제한대량화물코드</b></li> </ul>	<p>3</p> <p>E</p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>5L</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 g</p> <p>Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"> <li>· <b>UN번호</b></li> </ul>	<p>UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-METHYLENEBIS(N,N-DIGLYCIDYLANILINE)), 9, III</p>

### 15 법적 규제현황

해당 해당 수물질 또는 혼합물에 대한 안전보건자료(안전보건자료)를 법률

· <b>Korean Existing Chemical Inventory</b>		
7440-22-4	silver	KE-31261
28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	KE-23914

· **라벨링요소**  
 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· **그림문자**



· **신호어 경고**

(8 쪽에계속)

# 안전지침서

## 제조의와 2006/EL에 따라라따

기압점: 2016.04.19

개정: 2016.04.19

**제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(7 쪽부터계속)

- **상표상에명확히위험성이표시된성분:**  
4,4'-Methylenebis(N,N-diglycidylaniline)
- **유해유해유해유해유해문구**  
알레르기성 피부 반응을 일으킬 수 있음  
유전적인 결함을 일으킬 것으로 의심됨  
장기적인 영향에 의해 수생생물에게 매우 유독함
- **예방조치문구문구**  
(분진·흙·가스·미스트·증기·스프레이)의 흡입을 피하십시오.  
(보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.  
환경으로 배출하지 마시오.  
(라벨 참조) 처치를 하시오.  
잠금장치가 있는 저장장소에 저장 하시오.  
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- **화학물질 안전성 평가** 화학물질 안전성 평가가 수행되지 않음

### 16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

최초 **최초 작성일자:** 2016.04.19

개정 **개정 일자:** 1 / 2016.04.19

· **약어와 두문자어:**

- ADR: Accord européen sur le transport 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
- 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)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- 피부과민성 구분1: Sensitisation - Skin, Hazard Category 1
- 피부과민성 구분1: Sensitisation - Skin, Hazard Category 1
- 생식세포 변이원성 구분2: Germ cell mutagenicity, Hazard Category 2
- 수생환경유해성-급성 구분1: Hazardous to the aquatic environment - AcuteHazard, Category 1
- 수생환경유해성-만성 구분1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
- 수생환경유해성-만성 구분2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

# Risalah Data Keselamatan Bahan

## Menurut 91/155 EC

Tarikh cetak 19.04.2016

Disemak semula pada 19.04.2016

### 1 Pengenalpastian bahan/sediaan dan syarikat

- **Pengenalan pasti produk**
- **Nama dagang:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A
- **Nombor artikel:** 12642-14 (A)
- **Kegunaan berkaitan yang dikenal pasti bagi bahan atau campuran dan penggunaan**  
Tiada maklumat lanjut yang diperolehi.
- **Penggunaan bahan/sediaan** Bahan kimia makmal
- **Perincian pembekal risalah data keselamatan**
- **Pengilang/Pembekal:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Maklumat lanjut dapat diperolehi daripada:** Product safety department
- **Nombor telefon kecemasan:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 Pengenalpastian bahaya

- **Pengelasan bahan atau campuran**



Bahaya kesihatan

Muta. 2 H341 Disyaki menyebabkan kecacatan genetik.



Alam sekitar

Akuatik Kronik 1 H410 Sangat toksik kepada hidupan akuatik dengan kesan kekal berpanjangan.



Pem. Kulit 1 H317 Boleh menyebabkan tindak balas alahan kulit.

- **Melabelkan unsur**
- **Unsur label GHS** Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).
- **Piktogram hazard**



GHS07



GHS08



GHS09

- **Perkataan isyarat** Amaran
- **Komponen pelabelan yang menentukan bahaya:**  
4,4'-Methylenebis(N,N-diglycidylaniline)
- **Pernyataan hazard**  
Boleh menyebabkan tindak balas alahan kulit.

(Bersambung ke halaman 2)

# Risalah Data Keselamatan Bahan

## Menurut 91/155 EC

Tarikh cetak 19.04.2016

Disemak semula pada 19.04.2016

**Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**



(Sambungan halaman 1)

- Disyaki menyebabkan kecacatan genetik.
- Sangat toksik kepada hidupan akuatik dengan kesan kekal berpanjangan.
- **Pernyataan langkah perlindungan**
  - Elakkan daripada tersedut habuk/wasap/gas/kabus/wap/semburan.
  - Pakai sarung tangan pelindung/pakaian pelindung/perindungan mata/perindungan muka.
  - Elakkan pelepasan bahan ke persekitaran.
  - Rawatan khas (lihat label ini).
  - Simpan di tempat berkunci.
  - Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.
- **Bahaya lain**
- **Keputusan penilaian PBT dan vPvB**
  - **PBT:** Tidak berkenaan
  - **vPvB:** Tidak berkenaan

### 3 Komposisi/maklumat ramuan

- **Ciri kimia: Campuran**
- **Keterangan:** Campuran bahan disenaraikan di bawah bersama dengan bahan tambah tidak berbahaya.

· **Komponen berbahaya :**

7440-22-4	silver	50-100%
28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	25-50%
 Akuatik Akut 1, H400; Akuatik Kronik 2, H411;  Pem. Kulit 1, H317		

### 4 Langkah pertolongan cemas

- **Keterangan langkah pertolongan cemas**
- **Jika tersedut:**
  - Berikan udara bersih dan pastikan rawatan doktor diperoleh.
  - Jika mangsa tidak sedarkan diri, letakkan pesakit dengan stabil dalam kedudukan mengiring untuk diangkat.
- **Jika terkena kulit:** Segera basuh dengan air dan sabun serta bilas bersih-bersih.
- **Jika terkena mata:** Bilas mata sambil membukanya di bawah air yang mengalir selama beberapa minit.
- **Jika tertelan:** Jika gejala berterusan, hubungi doktor.
- **Maklumat untuk doktor:**
- **Gejala dan kesan paling penting, akut dan lewat** Tiada maklumat lanjut yang diperoleh.
- **Arahan bagi apa-apa rawatan perubatan dan rawatan khas yang diperlukan**
  - Tiada maklumat lanjut yang diperoleh.

### 5 Langkah memadam kebakaran

- **Bahan pemadam api**
- **Agan pemadam yang sesuai:** Gunakan kaedah pemadaman kebakaran yang sesuai dengan keadaan sekeliling.
- **Bahaya khusus yang timbul daripada bahan atau campuran** Tiada maklumat lanjut yang diperoleh.
- **Panduan kepada pemadam kebakaran**
- **Kelengkapan perlindungan:** Tiada langkah khusus diperlukan.

### 6 Langkah menangani pelepasan yang tidak disengajakan

- **Langkah perlindungan diri, kelengkapan pelindung dan prosedur kecemasan** Tidak diperlukan.
- **Langkah perlindungan alam sekitar:**
  - Hubungi pihak berkuasa berkaitan jika berlaku peresapan masuk ke dalam saluran air atau sistem pembetulan.

(Bersambung ke halaman 3)

# Risalah Data Keselamatan Bahan

## Menurut 91/155 EC

Tarikh cetak 19.04.2016

Disemak semula pada 19.04.2016

**Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Sambungan halaman 2)

- Jangan biarkannya memasuki pembentuk/air permukaan atau tanah.*
- **Kaedah dan bahan untuk pembendungan dan pembersihan:**  
*Lupuskan bahan tercemar sebagai sisa mengikut perkara 13.*
- **Rujukan ke bahagian lain**  
*Lihat Bahagian 7 untuk maklumat pengendalian yang selamat.*  
*Lihat Bahagian 8 untuk maklumat kelengkapan perlindungan diri.*  
*Lihat Bahagian 13 untuk maklumat pelupusan.*

### 7 Pengendalian dan penyimpanan

- **Pengendalian:**
- **Langkah perlindungan untuk pengendalian selamat**  
*Tiada langkah berjaga-jaga yang khusus diperlukan jika ia digunakan dengan betul.*
- **Maklumat kebakaran dan perlindungan daripada letupan:** *Tiada langkah berjaga-jaga yang khusus diperlukan.*
- **Keadaan untuk penyimpanan selamat, termasuk apa-apa ketakserasian**
- **Penyimpanan:**
- **Keperluan yang mesti dipenuhi oleh bilik stor dan ruang simpanan.** *Tiada keperluan khusus.*
- **Maklumat penyimpanan di dalam satu tempat penyimpanan yang biasa:** *Tidak diperlukan.*
- **Maklumat lanjut tentang syarat penyimpanan:** *Tiada.*
- **Kegunaan akhir yang khusus** *Tidak maklumat lanjut yang diperoleh.*

### 8 Kawalan pendedahan/perlindungan diri

- **Maklumat tambahan tentang reka bentuk kemudahan teknikal:** *Tiada maklumat lanjut, lihat perkara 7.*
- **Parameter kawalan**

- **Ramuan dengan nilai had yang memerlukan pemantauan di tempat kerja:**

7440-22-4 silver

PEL Nilai jangka panjang: 0,1\* 0,01\*\* mg/m<sup>3</sup>  
\*Logum \*\*Sebatian terlarutkan, sebagai Ag

- **Maklumat tambahan:** *Senarai yang sah semasa pembuatan digunakan sebagai asas.*
- **Kawalan pendedahan**
- **Kelengkapan perlindungan diri:**
- **Langkah perlindungan dan kebersihan am:**  
*Jauhkan daripada makanan, minuman dan makanan haiwan.*  
*Segera tanggalkan semua pakaian yang tercemar dan kotor.*  
*Basuh tangan sebelum berhenti rehat dan apabila kerja selesai.*
- **Perlindungan pernafasan:**  
*Jika berlaku pendedahan sekejap atau sedikit pencemaran, gunakan alat penapis pernafasan. Jika berlaku pendedahan yang intensif atau berpanjangan, gunakan alat pernafasan perlindungan serba lengkap.*
- **Perlindungan tangan:**



Sarung tangan pelindung.

*Bahan sarung tangan hendaklah telus dan kalis terhadap produk/bahan/sediaan.*  
*Oleh sebab tiada ujian yang dijalankan, maka tiada syor bagi bahan sarung tangan yang boleh diberikan untuk produk/sediaan/campuran kimia.*  
*Pemilihan bahan sarung tangan berdasarkan waktu penembusan, kadar pembauran dan degradasi.*

(Bersambung ke halaman 4)

## Risalah Data Keselamatan Bahan Menurut 91/155 EC

Tarikh cetak 19.04.2016

Disemak semula pada 19.04.2016

**Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Sambungan halaman 3)

· **Bahan sarung tangan**

Pemilihan sarung tangan yang sesuai bukan hanya bergantung pada bahannya, tetapi juga tanda kualiti lainnya serta perbezaannya daripada satu pengeluar dengan pengeluar yang lain. Memandangkan produk merupakan suatu sediaan daripada beberapa bahan, ketahanan bahan sarung tangan tidak boleh dipastikan terlebih dahulu, oleh itu sarung tangan hendaklah diperiksa sebelum digunakan.

· **Jangka masa penyerapan bahan sarung tangan**

Waktu kemunculan yang tepat hendaklah diperolehi pengeluar sarung tangan pelindung dan hendaklah dipatuhi.

· **Perlindungan mata:** Tidak diperlukan.

### 9 Ciri fizik dan kimia

· <b>Maklumat tentang ciri fizik dan kimia</b>	
· <b>Maklumat Am</b>	
· <b>Rupa:</b>	
<b>Bentuk:</b>	Berpes
<b>Warna:</b>	Berwarna perak
· <b>Bau:</b>	Lembut
· <b>Had ambang bau:</b>	Tidak ditentukan.
· <b>Nilai pH:</b>	Tidak berkenaan
· <b>Perubahan pada keadaan</b>	
<b>Takat lebur/Julat lebur:</b>	Tidak ditentukan.
<b>Takat didih/Julat didih:</b>	Tidak ditentukan
· <b>Takat kilat:</b>	> 150 °C
· <b>Kemudahbakaran (pepejal, gas)</b>	Tidak ditentukan.
· <b>Suhu pencucuhan:</b>	
<b>Suhu penguraian:</b>	Tidak ditentukan.
· <b>Pencucuhan sendiri</b>	Produk tidak tercucuh sendiri
· <b>Bahaya letupan:</b>	Produk tidak ada bahaya letupan.
· <b>Had letupan :</b>	
<b>Bawah:</b>	Tidak ditentukan.
<b>Atas:</b>	Tidak ditentukan.
· <b>Tekanan wap:</b>	Tidak berkenaan
· <b>Ketumpatan:</b>	Tidak ditentukan.
· <b>Ketumpatan relatif</b>	Tidak ditentukan.
· <b>Ketumpatan wap</b>	Tidak berkenaan
· <b>Kadar penyejatan</b>	Tidak berkenaan
· <b>Keterlarutan dalam / Keterlarutcampuran dengan</b>	
<b>Air:</b>	Tidak larut.
· <b>Pekali pengasingan (n-oktanol/air)</b>	Tidak ditentukan.
· <b>Kelikatan:</b>	
<b>Dinamik:</b>	Tidak berkenaan
<b>Kinematik:</b>	Tidak berkenaan
· <b>Kandungan pelarut:</b>	
<b>Pelarut organik:</b>	0.0 %

(Bersambung ke halaman 5)

MY

## Risalah Data Keselamatan Bahan Menurut 91/155 EC

Tarikh cetak 19.04.2016

Disemak semula pada 19.04.2016

**Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Sambungan halaman 4)

<b>Kandungan pepejal:</b>	70.0 %
<b>Maklumat lain</b>	Tiada maklumat lanjut yang diperolehi.

### 10 Kestabilan dan kereaktifan

- **Kereaktifan** Tiada maklumat lanjut yang diperolehi.
- **Kestabilan kimia**
- **Penguraian terma/keadaan yang perlu dielakkan:** Tiada penguraian jika digunakan mengikut spesifikasi.
- **Kemungkinan tindak balas berbahaya** Tiada tindak balas berbahaya yang diketahui.
- **Keadaan yang perlu dielakkan** Tiada maklumat lanjut yang diperolehi.
- **Bahan tidak serasi:** Tiada maklumat lanjut yang diperolehi.
- **Produk penguraian yang berbahaya:** Tiada produk penguraian berbahaya yang diketahui.

### 11 Maklumat toksikologi

- **Maklumat tentang kesan toksikologi**
- **Ketoksikan akut:**
- **Kesan kerengsaan primer:**
- **pada kulit:** Tiada kesan merengsa.
- **pada mata** Tiada kesan kerengsaan.
- **Pemekaan:** Pemekaan mungkin berlaku jika terkena kulit.
- **Maklumat tambahan toksikologi:**  
Produk menunjukkan bahaya berikut mengikut kaedah pengiraan Garis Panduan Pengelasan Am EU bagi Sediaan seperti yang dikeluarkan dalam versi terbaru:  
Perengsa
- **Maklumat bagi kumpulan berikut tentang kesan yang mungkin timbul.**
- **Kesan CMR (karsinogen, mutagen dan gangguan kesuburan)**  
Muta. 2

### 12 Maklumat ekologi

- **Ketoksikan**
- **Ketoksikan akuatik:** Tiada maklumat lanjut yang diperolehi.
- **Keterusan dan keterdegradasikan** Tiada maklumat lanjut yang diperolehi.
- **Kelakuan dalam sistem alam sekitar:**
- **Potensi bioakumulatif** Tiada maklumat lanjut yang diperolehi.
- **Mobiliti di dalam tanah** Tiada maklumat lanjut yang diperolehi.
- **Kesan ekotoksik:**
- **Catatan:** Sangat toksik kepada ikan
- **Maklumat tambahan ekologi:**
- **Nota am:**  
Bahaya air kelas 1 (Peraturan Jerman) (Penilaian sendiri): sedikit berbahaya kepada air  
Jangan biarkan produk yang tidak dicairkan atau dalam kuantiti yang banyak memasuki air tanah, saluran air atau sistem pembetungan.  
Juga beracun kepada ikan dan plankton dalam jasad air  
Sangat toksik kepada organisma akuatik
- **Keputusan penilaian PBT dan vPvB**
- **PBT:** Tidak berkenaan
- **vPvB:** Tidak berkenaan

(Bersambung ke halaman 6)



## Risalah Data Keselamatan Bahan Menurut 91/155 EC

Tarikh cetak 19.04.2016

Disemak semula pada 19.04.2016

**Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Sambungan halaman 5)

· **Kesan buruk yang lain** Tiada maklumat lanjut yang diperolehi.

### 13 Maklumat pelupusan

- **Kaedah rawatan sisa**
- **Syor:**  
Tidak boleh dilupuskan bersama dengan sampah isi rumah. Jangan biarkan produk memasuki sistem pembentukan.
- **Pembungkusan yang tidak bersih:**
- **Syor:** Pelupusan mestilah dijalankan menurut peraturan rasmi

### 14 Maklumat pengangkutan

<ul style="list-style-type: none"> <li>· <b>Nombor UN</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	UN3077
<ul style="list-style-type: none"> <li>· <b>Nama penghantaran UN yang betul</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))
<ul style="list-style-type: none"> <li>· <b>pengangkutan kelas bahaya</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Kelas</b></li> <li>· <b>Label</b></li> </ul>	9 Berbagai-bagai bahan dan artikel berbahaya. 9
<ul style="list-style-type: none"> <li>· <b>Kumpulan pembungkusan</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	III
<ul style="list-style-type: none"> <li>· <b>Hazard persekitaran:</b></li> <li>· <b>Bahan cemar marin:</b></li> <li>· <b>Pelabelan khas (ADR):</b></li> <li>· <b>Pelabelan khas (IATA):</b></li> </ul>	Produk mengandungi bahan yang berbahaya kepada alam sekitar: 4,4'-Methylenebis(N,N-diglycidylaniline) Tanda (ikan dan pokok) Tanda (ikan dan pokok) Tanda (ikan dan pokok)
<ul style="list-style-type: none"> <li>· <b>Langkah perlindungan khas untuk pengguna</b></li> <li>· <b>Kod bahaya (Kemler):</b></li> <li>· <b>Nombor EMS:</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> </ul>	Amaran: Berbagai-bagai bahan dan artikel berbahaya. 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
<ul style="list-style-type: none"> <li>· <b>Pengangkutan dalam pukal menurut Lampiran II MARPOL73/78 dan Kod IBC</b></li> </ul>	Tidak berkenaan

(Bersambung ke halaman 7)

## Risalah Data Keselamatan Bahan Menurut 91/155 EC

Tarikh cetak 19.04.2016

Disemak semula pada 19.04.2016

**Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Sambungan halaman 6)

**· Pengangkutan/Maklumat Tambahan:**

**· ADR**

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

**· IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **"Peraturan Model" UN:**

UN 3077 ENVIRONMENTALLY HAZARDOUS  
SUBSTANCE, SOLID, N.O.S. (4,4'-METHYLENEBIS(N,N-  
DIGLYCIDYLANILINE)), 9, III

### 15 Maklumat Pengawalan

- **Peraturan/undang-undang keselamatan, kesihatan dan persekitaran khusus untuk bahan atau campuran tersebut**
- **Unsur label GHS** Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).
- **Piktogram hazard**



GHS07    GHS08    GHS09

- **Perkataan isyarat Amaran**
- **Komponen pelabelan yang menentukan bahaya:**  
4,4'-Methylenebis(N,N-diglycidylaniline)
- **Pernyataan hazard**  
Boleh menyebabkan tindak balas alahan kulit.  
Disyaki menyebabkan kecacatan genetik.  
Sangat toksik kepada hidupan akuatik dengan kesan kekal berpanjangan.
- **Pernyataan langkah perlindungan**  
Elakkan daripada tersedut habuk/wasap/gas/kabus/wap/semburan.  
Pakai sarung tangan pelindung/pakaian pelindung/perlindungan mata/perlindungan muka.  
Elakkan pelepasan bahan ke persekitaran.  
Rawatan khas (lihat label ini).  
Simpan di tempat berkunci.  
Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.
- **Penilaian keselamatan bahan kimia:** Penilaian Keselamatan Bahan Kimia belum dilakukan.

### 16 Maklumat lain

Maklumat ini berdasarkan maklumat kami yang terkini. Walau bagaimanapun, ini tidak akan menjadi jaminan bagi apa-apa ciri produk yang khusus dan tidak akan mewujudkan hubungan kontraktual yang sah dari segi undang-undang.

(Bersambung ke halaman 8)

# Risalah Data Keselamatan Bahan

## Menurut 91/155 EC

Tarikh cetak 19.04.2016

Disemak semula pada 19.04.2016

**Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(Sambungan halaman 7)

**· Singkatan dan akronim:**

*ADR: Accord européen sur le transport 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*

*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)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Pem. Kulit 1: Sensitisation - Skin, Hazard Category 1*

*Pem. Kulit 1: Sensitisation - Skin, Hazard Category 1*

*Muta. 2: Germ cell mutagenicity, Hazard Category 2*

*Akuatik Akut 1: Hazardous to the aquatic environment - AcuteHazard, Category 1*

*Akuatik Kronik 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1*

*Akuatik Kronik 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2*

-MY-

# Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 19.04.2016

revidert den: 19.04.2016

## Avsnitt 1: Identifikasjon av kjemikaliyet og ansvarlig firma

- **1.1 Produktidentifikator**
- **Handelsnavn:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A
- **Artikkelnummer:** 12642-14 (A)
- **1.2 Relevante, identifiserte anvendelser av stoffet eller stoffblandingen, samt anvendelser som frarådes**  
Ikke noe mer relevant informasjon tilgjengelig.
- **Bruk av stoffet/ tilberedning** laboratoriekjemikalier
- **1.3 Enkeltopplysninger om foretaket som leverer sikkerhetsdatabladet**
- **Produsent/leverandør:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Avdeling for nærmere informasjon:** Product safety department
- **1.4 Nødnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## Avsnitt 2: Viktigste faremomenter

- **2.1 Klassifisering av stoff eller stoffblanding**
- **Klassifisering i henhold til EC-forskrift nr.1272/2008**



GHS08 Helsefare

Muta. 2                      H341 Mistenkes å kunne gi genetiske skader.



GHS09 Miljø

Aquatic Chronic 1 H410 Meget giftig, med langtidsvirkning, for liv i vann.



GHS07

Skin Sens. 1                      H317 Kan utløse en allergisk hudreaksjon.

- **2.2 Etikettelementer**
- **Merking iht. bestemmelse (EC) Nr. 1272/2008**  
Produktet er klassifisert og merket i henhold til CLP-forordningen.
- **Farepiktogrammer**



GHS07



GHS08



GHS09

- **Varselord** Advarsel
- **Farebestemmende komponenter ved etikettering:**  
4,4'-Methylenebis(N,N-diglycidylaniline)

(fortsatt på side 2)

# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 19.04.2016

revidert den: 19.04.2016

**Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(fortsatt fra side 1)

- **Faresetninger**
  - H317 Kan utløse en allergisk hudreaksjon.
  - H341 Mistenkes å kunne gi genetiske skader.
  - H410 Meget giftig, med langtidsvirkning, for liv i vann.
- **Sikkerhetssetninger**
  - P261 Unngå innånding av støv/røyk/gass/tåke/damp/aerosoler.
  - P280 Benytt vernehansker/verneklær/vernebriller/ansiktsskjerm.
  - P273 Unngå utslipp til miljøet.
  - P321 Særlig behandling (se på etiketten).
  - P405 Oppbevares innelåst.
  - P501 Innholdet / emballasjen skal avhendes i henhold til de lokale / regionale / nasjonale / internasjonale forskrifter.
- **2.3 Andre farer**
- **Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.

### Avsnitt 3: Stoffblandingers sammensetning og stoffenes klassifisering

- **3.2 Kjemisk karakterisering: Blandinger**
- **Beskrivelse:** Blanding av nedenstående oppførte stoffer med ufarlige tilsetninger.

- **Farlige innholdsstoffer:**

CAS: 7440-22-4	silver	50-100%
EINECS: 231-131-3	stoff med fellesskapsgrenseverdi for eksponering på arbeidsplassen	
CAS: 28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	25-50%
	⚠ Aquatic Chronic 2, H411; ⚠ Skin Sens. 1B, H317	

- **Ytterligere informasjon:** Teksten til de fareangivelsene som er inkludert her, kan konsulteres i kapittel 16.

### Avsnitt 4: Førstehjelpstiltak

- **4.1 Beskrivelse av førstehjelpstiltak**
- **Etter innånding:**
  - Rikelig frisklufttilførsel, søk legehjelp for sikkerhets skyld.
  - Ved bevisstløshet lagring og transport i stabil sidestilling.
- **Etter hudkontakt:** Vask straks med vann og sepe og skyll godt etterpå.
- **Etter øyekontakt:** Skyll øynene med åpne øyenlokk i flere minutter under rennende vann.
- **Etter svelging:** Ved fortsatt besvær må lege konsulteres.
- **4.2 De viktigste symptomer og effekter, både akutt og forsinket** Ikke noe mer relevant informasjon tilgjengelig.
- **4.3 Indikasjon på omgående medisinsk hjelp eller påkrevet spesialbehandling**
  - Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 5: Tiltak ved brannslukning

- **5.1 Slökkemiddel**
- **Egnede slukningsmidler:** Brannslukningstiltak tilpasses omgivelsene.
- **5.2 Spesielle farer som oppstår pga. substanser eller blandinger** Ikke noe mer relevant informasjon tilgjengelig.
- **5.3 Informasjon vedr. brannbekjempelse**
- **Spesielt verneutstyr:** Ingen spesielle tiltak nødvendig.

NO

(fortsatt på side 3)

# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

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(fortsatt fra side 2)

### Avsnitt 6: Tiltak ved utilsiktet utslipp

- **6.1 Personlige vernetiltak, verneutstyr og prosedyrer ved nødsituasjoner** Ikke nødvendig.
- **6.2 Miljøvernetiltak:**  
Ansvarlige myndigheter varsles hvis produktet er kommet ned i vassdrag eller kloakk.  
La ikke produktet komme ned i kloakk/overflatevann/grunnvann.
- **6.3 Metoder og materiale for oppsamling og opprensing:**  
Bortskaff kontaminert matereriale som avfall i.h.t. punkt 13.
- **6.4 Henvisning til andre avsnitt**  
Informasjoner om sikker håndtering, se kapittel 7.  
Informasjoner om personlig beskyttelsesutstyr, se kapittel 8.  
Informasjoner om bortskaffelse/deponering, se kapittel 13.

### Avsnitt 7: Håndtering og oppbevaring

- **7.1 Forholdsregler for sikker håndtering** Ved sakkyndig bruk er spesielle tiltak unødvendig.
- **Henvisninger om brann- og eksplosjonsvern:** Ingen særlige tiltak nødvendig.
- **7.2 Vilkår for sikker lagring, inkl. eventuelle inkompatibiliteter**
- **Lagring:**
- **Krav til lagerrom og beholdere:** Ingen spesielle krav.
- **Informasjoner om felles lagring:** Ikke nødvendig.
- **Ytterligere informasjoner om lagervilkårene:** Ingen.
- **7.3 Spesiell sluttbruk** Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 8: Eksponeringskontroll og personlig verneutstyr

- **Ytterligere informasjoner om utforming av tekniske anlegg:** Ingen ytterligere informasjoner, se punkt 7.
- **8.1 Kontrollparametere**

· **Komponenter med grenseverdier for arbeidsplass som må overholdes:**

7440-22-4 silver

AG	Langtidsverdi: 0,1 mg/m <sup>3</sup> metalstøv og røyk, E
----	--

- **Ytterligere informasjoner:** Basis: listene som var gyldige ved oppstillingen.
- **8.2 Begrensning og kontroll av eksponering**
- **Personlig verneutstyr:**
- **Generelle verne- og hygienetiltak:**  
Holdes adskilt fra næringsmidler, drikkevarer og førestoffer.  
Fjern omgående forurensede, gjennomvætede klær.  
Vask hendene før arbeidspauser og ved arbeidets slutt.
- **Åndedrettsvern:**  
Ved korttidig eller liten belastning åndedrettsfilterapparat; ved intensiv eller lengre utsetting: bruk omluft-uavhengig åndedrettsbeskyttelsesapparat.
- **Håndvern:**



Beskyttelseshansker

Hanskematerialet må være ugjennomtrengelig og bestandig overfor produktet /stoffet /blandingen.

(fortsatt på side 4)

**Sikkerhetsdatablad**  
iflg. forordning (EF) nr. 1907/2006, Artikkel 31

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**Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(fortsatt fra side 3)

På grunn av manglende tester kan det ikke gis noen anbefaling om hanskemateriale for produktet / tilberedningsprosessen/kjemikalieblandingen.

Hanskematerialet velges under hensyntagen til holdbarhetstid, gjennomtrengelighet og degradering.

· **hanskemateriale**

Valget av egnet hanske er ikke bare avhengig av materiale, men også av andre kvalitetskjenner og er forskjellig fra produsent til produsent. Da produktet representerer en sammensetning av flere stoffer, kan holdbarheten av hanskematerialet ikke forhåndsberegnes, og denne må testes før bruk.

· **gjennomtrengingstid for hanskemateriale**

Den nøyaktige holdbarhetstiden må bringes på det rene hos hanskeprodusenten og overholdes.

· **Øyevern:** Ikke nødvendig.

### Avsnitt 9: Fysiske og kjemiske egenskaper

· **9.1 Informasjon om grunnleggende fysiske og kjemiske egenskaper**

· **alminnelige opplysninger**

· **Utseende:**

· **Form:** Pastalignende

· **Farge:** Sølvfarget

· **Lukt:** Mild

· **Lukterskel:** Ikke bestemt.

· **pH-verdi:** Ikke brukbar.

· **Tilstandsending**

· **Smeltepunkt/smelteområde:** Ikke bestemt.

· **Kokepunkt/kokeområde:** Ikke bestemt.

· **Flammepunkt:** > 150 °C

· **Antennelighet (fast, gassformet):** Ikke bestemt.

· **Antennelsestemperatur:**

· **Spaltningsstemperatur:** Ikke bestemt.

· **Selvantennelighet:** Produktet er ikke selvantennelig.

· **Ekspløsjonsfare:** Produktet er ikke ekspløsjonsfarlig.

· **Ekspløsjonsgrenser:**

· **Nedre:** Ikke bestemt.

· **Øvre:** Ikke bestemt.

· **Damptrykk:** Ikke brukbar.

· **Tetthet:** Ikke bestemt.

· **relativt tetthet:** Ikke bestemt.

· **damptetthet:** Ikke brukbar.

· **fordampningshastighet:** Ikke brukbar.

· **Løslighet i / blandbarhet med**

· **vann:** Uløslig.

· **Fordelingskoeffisient (n-oktanol/vann):** Ikke bestemt.

· **Viskositet:**

· **Dynamisk:** Ikke brukbar.

· **Kinematisk:** Ikke brukbar.

(fortsatt på side 5)



# Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

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**Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(fortsatt fra side 4)

<b>· Løsningsmiddelandel:</b>	
<b>Organiske løsningsmidler:</b>	0.0 %
<b>VOC (EF)</b>	0,00 %
<b>Andel faste stoffer:</b>	
<b>· 9.2 Annen informasjon</b>	70.0 % Ikke noe mer relevant informasjon tilgjengelig.

## Avsnitt 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Ikke noe mer relevant informasjon tilgjengelig.
- **10.2 Kjemisk stabilitet**
- **Termisk spaltning / vilkår som må unngås:** Ingen spaltning ved formålsriktig bruk.
- **10.3 Mulighet for farlige reaksjoner** Det kjennes ingen farlige reaksjoner.
- **10.4 Forhold som bør unngås** Ikke noe mer relevant informasjon tilgjengelig.
- **10.5 Inkompatible materialer:** Ikke noe mer relevant informasjon tilgjengelig.
- **10.6 Farlige nedbrytningsprodukter:** Ingen farlige spaltningsprodukter kjente.

## Avsnitt 11: Opplysninger om helsefare

- **11.1 Informasjon om toksikologiske virkninger**
- **Akutt giftighet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Primær irritasjonsvirkning:**
- **Hudetsing/hudirritasjon** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Alvorlig øyeskade/øyeirritasjon** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Sensibiliserende ved innånding eller hudkontakt**  
Kan utløse en allergisk hudreaksjon.
- **Informasjon om følgende grupper med potensielle virkninger:**
- **CMR-virkninger (kreftfremkallende virkninger, arvestoffskadelige og reproduksjonsskadelige virkninger)**
- **Skader på arvestoffet i kjønnsceller**  
Mistenkes å kunne gi genetiske skader.
- **Kreftfremkallende egenskap** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Reproduksjonstoksisitet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **STOT – enkelteksponering** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **STOT – gjentatt eksponering** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Aspirasjonsfare** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

## Avsnitt 12: Miljøopplysninger

- **12.1 Giftighet**
- **Akvatisk toksisitet:** Ikke noe mer relevant informasjon tilgjengelig.
- **12.2 Persistens og nedbrytbarhet** Ikke noe mer relevant informasjon tilgjengelig.
- **12.3 Bioakkumulasjonspotensial** Ikke noe mer relevant informasjon tilgjengelig.
- **12.4 Mobilitet i jord** Ikke noe mer relevant informasjon tilgjengelig.
- **Økotoksiske virkninger:**
- **Bemerkning:** meget giftig for fisk
- **Ytterligere økologiske informasjon:**
- **Generelle informasjon:**  
Vannfareklasse 1 (D) (Selvklassifisering): lett farlig for vann  
Ikke la stoffet komme ufortynnet ned i grunnvannet, i vassdrag eller i kloakker.  
I vassdrag også giftig for fisker og plankton.

(fortsatt på side 6)

# Sikkerhetsdatablad

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Trykkdato: 19.04.2016

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**Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

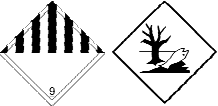
(fortsatt fra side 5)

- meget giftig for vannorganismer
- **12.5 Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.
- **12.6 Andre skadelige virkninger** Ikke noe mer relevant informasjon tilgjengelig.

## Avsnitt 13: Fjerning av kjemikalieavfall

- **13.1 Metoder for avfallsbehandling**
- **Anbefaling:** Må ikke bortskaffes sammen med husholdningsavfall. Må ikke komme ned i kloakk.
- **Ikke rengjort emballasje:**
- **Anbefaling:** Deponering i henhold til myndighetenes forskrifter.

## Avsnitt 14: Opplysninger om transport

- |  |  |
|--|--|
| · <b>14.1 UN-nummer:</b><br>· <b>ADR, IMDG, IATA</b>   | UN3077   |
| · <b>14.2 Korrekt UN-forsendelsesbetegnelse</b><br>· <b>ADR</b><br><br>· <b>IMDG</b><br><br>· <b>IATA</b>  | 3077 MILJØFARLIG STOFF, I FAST FORM, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline))<br>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT<br>Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline)) |
| · <b>14.3 transport fareklasser</b><br>· <b>ADR, IMDG, IATA</b><br><br> | 9 Forskjellige farlige stoffer og gjenstander<br>9   |
| · <b>14.4 Emballasjegruppe:</b><br>· <b>ADR, IMDG, IATA</b>  | III  |
| · <b>14.5 Miljøfarer:</b><br><br>· <b>Marine pollutant:</b><br>· <b>Spesielle merking (ADR):</b><br>· <b>Spesielle merking (IATA):</b>                     | Produktet inneholder miljøskadelige stoffer: 4,4'-Methylenebis(N,N-diglycidylaniline)<br>Symbol (fisk og treet)<br>Symbol (fisk og treet)<br>Symbol (fisk og treet)  |
| · <b>14.6 Særskilte forholdsregler for bruker</b><br>· <b>Kemler-tall:</b><br>· <b>EMS-nummer:</b><br>· <b>Stowage Category</b><br>· <b>Stowage Code</b>   | Advarsel: Forskjellige farlige stoffer og gjenstander<br>90<br>F-A,S-F<br>A<br>SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.  |

(fortsatt på side 7)

# Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

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**Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A**

(fortsatt fra side 6)

· <b>14.7 Transport i bulk iht. annekset II til MARPOL 73/78 og til IBC-koden</b>	Ikke brukbar.
· <b>Transport/ytterligere informasjon:</b>	
· <b>ADR</b>	
· <b>Begrenset mengde (LQ)</b>	5 kg
· <b>Unntatte mengder (EQ)</b>	Kode: E1 Maksimal nettovekt per inneremballasje: 30 g Maksimal nettovekt per ytteremballasje: 1000 g
· <b>Transportkategori</b>	3
· <b>Tunnel restriksjonskode</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Kode: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· <b>UN "Model Regulation":</b>	UN 3077 MILJØFARLIG STOFF, I FAST FORM, N. O. S. (4, 4' - METHYLENE BIS (N, N - DIGLYCIDYLANILINE)), 9, III

## Avsnitt 15: Opplysninger om lover og forskrifter

- **15.1 Helse-, sikkerhets- og miljøforskrifter/lovgivning som gjelder spesielt for stoffet eller stoffblandingen**  
Ikke noe mer relevant informasjon tilgjengelig.
- **15.2 Kjemisk sikkerhetsvurdering:** En kjemisk sikkerhetsvurdering er ikke utført.

## Avsnitt 16: Andre opplysninger av betydning for helse, miljø og sikkerhet

Opplysningene er basert på vårt kjennskap i dag. De utgjør dog ingen forsikring om produktens egenskaper og er ikke grunnlag for noe kontraktmessig rettsforhold.

- **Relevante satser**  
H317 Kan utløse en allergisk hudreaksjon.  
H411 Giftig, med langtidsvirkning, for liv i vann.
- **Forkortelser og akronymer:**  
ADR: Accord européen sur le transport 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)  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1  
Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B  
Muta. 2: Germ cell mutagenicity, Hazard Category 2  
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 19.04.2016

Revisión: 19.04.2016

### SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

#### · 1.1 Identificador del producto

· **Nombre comercial:** *TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE, PART A*

· **Número del artículo:** 12642-14 (A)

#### · 1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados

*No existen más datos relevantes disponibles.*

· **Utilización del producto / de la elaboración** *Sustancias químicas de laboratorio*

#### · 1.3 Datos del proveedor de la ficha de datos de seguridad

##### · **Fabricante/distribuidor:**

*Electron Microscopy Sciences*

*1560 Industry Road*

*USA-Hatfield, PA 19440*

*Tel: 215-412-8400 Fax: 215-412-8450*

*email: info@emsdiasum.com*

*www.emsdiasum.com*

*Aname*

*C/ Perez Galdos no. 2*

*28693 Quijorna*

*Madrid, Spain*

*Tel: +34.91.816.89.50*

*Fax: +34.91.816.85.94*

*email: ventas@aname.es*

· **Área de información:** *Product safety department*

#### · 1.4 Teléfono de emergencia:

*ChemTrec 1-800-424-9300 Contract CCN7661*

*1-703-527-3887*

### SECCIÓN 2: Identificación de los peligros

#### · 2.1 Clasificación de la sustancia o de la mezcla

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



*GHS08 peligro para la salud*

*Muta. 2*

*H341 Se sospecha que provoca defectos genéticos.*



*GHS09 medio ambiente*

*Aquatic Chronic 1 H410 Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.*



*GHS07*

*Skin Sens. 1*

*H317 Puede provocar una reacción alérgica en la piel.*

#### · 2.2 Elementos de la etiqueta

· **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**

*El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.*

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( se continua en página 1 )

**Pictogramas de peligro**


GHS07 GHS08 GHS09

**Palabra de advertencia** Atención

**Componentes peligrosos a indicar en el etiquetaje:**

4,4'-Methylenebis(N,N-diglycidylaniline)

**Indicaciones de peligro**

H317 Puede provocar una reacción alérgica en la piel.

H341 Se sospecha que provoca defectos genéticos.

H410 Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.

**Consejos de prudencia**

P261 Evitar respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.

P280 Llevar guantes/prendas/gafas/máscara de protección.

P273 Evitar su liberación al medio ambiente.

P321 Se necesita un tratamiento específico (ver en esta etiqueta).

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

**2.3 Otros peligros**
**Resultados de la valoración PBT y mPmB**
**PBT:** No aplicable.

**mPmB:** No aplicable.

### SECCIÓN 3: Composición/información sobre los componentes

**3.2 Caracterización química: Mezclas**
**Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

**Componentes peligrosos:**

CAS: 7440-22-4	plata	50-100%
EINECS: 231-131-3	sustancia a la que se aplica un límite comunitario de exposición en el lugar de trabajo	
CAS: 28768-32-3	4,4'-Methylenebis(N,N-diglycidylaniline)	25-50%
	Aquatic Chronic 2, H411;  Skin Sens. 1B, H317	

**Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

### SECCIÓN 4: Primeros auxilios

**4.1 Descripción de los primeros auxilios**
**En caso de inhalación del producto:**

Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

**En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.

**En caso de con los ojos:** Limpiar los ojos abiertos durante varios minutos con agua corriente.

**En caso de ingestión:** Consultar un médico si los trastornos persisten.

**4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.

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( se continua en página 2 )

- **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente**  
No existen más datos relevantes disponibles.

### SECCIÓN 5: Medidas de lucha contra incendios

- **5.1 Medios de extinción**
- **Sustancias extintoras apropiadas:** Combatir los incendios con medidas adaptados al ambiente circundante.
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** No se requieren medidas especiales.

### SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia** No es necesario.
- **6.2 Precauciones relativas al medio ambiente:**  
Al penetrar en las aguas o en el alcantarillado, avisar a las autoridades pertinentes.  
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **6.3 Métodos y material de contención y de limpieza:**  
Desechar el material contaminado como vertido según ítem 13.
- **6.4 Referencia a otras secciones**  
Ver capítulo 7 para mayor información sobre una manipulación segura.  
Ver capítulo 8 para mayor información sobre el equipo personal de protección.  
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

### SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**  
Si se manipulan correctamente, no se requieren medidas especiales.
- **Prevención de incendios y explosiones:** No se requieren medidas especiales.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:** Ningunos, -as.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

### SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**  
Sin datos adicionales, ver punto 7.

#### · 8.1 Parámetros de control

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

7440-22-4 plata

LEP	Valor de larga duración: 0,1 mg/m <sup>3</sup>
VLI	

- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

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### · 8.2 Controles de la exposición

#### · Equipo de protección individual:

#### · Medidas generales de protección e higiene:

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

Lavarse las manos antes de las pausas y al final del trabajo.

#### · Protección respiratoria:

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

#### · Protección de manos:



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

#### · Material de los guantes

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

#### · Tiempo de penetración del material de los guantes

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

#### · Protección de ojos: No es necesario.

## SECCIÓN 9: Propiedades físicas y químicas

### · 9.1 Información sobre propiedades físicas y químicas básicas

#### · Datos generales

#### · Aspecto:

**Forma:** Pastoso

**Color:** Plateado

· **Olor:** Suave

· **Umbral olfativo:** No determinado.

· **valor pH:** No aplicable.

#### · Cambio de estado

**Punto de fusión /campo de fusión:** Indeterminado.

**Punto de ebullición /campo de ebullición:** Indeterminado.

· **Punto de inflamación:** > 150 °C

· **Inflamabilidad (sólido, gaseiforme):** No determinado.

#### · Temperatura de ignición:

**Temperatura de descomposición:** No determinado.

· **Autoinflamabilidad:** El producto no es autoinflamable.

· **Peligro de explosión:** El producto no es explosivo.

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· <b>Límites de explosión:</b>	
<b>Inferior:</b>	No determinado.
<b>Superior:</b>	No determinado.
· <b>Presión de vapor:</b>	No aplicable.
· <b>Densidad:</b>	Indeterminado.
· <b>Densidad relativa</b>	No determinado.
· <b>Densidad de vapor</b>	No aplicable.
· <b>Velocidad de evaporación</b>	No aplicable.
· <b>Solubilidad en / miscibilidad con agua:</b>	Insoluble.
· <b>Coefficiente de reparto (n-octanol/agua):</b>	No determinado.
· <b>Viscosidad:</b>	
<b>Dinámica:</b>	No aplicable.
<b>Cinemática:</b>	No aplicable.
· <b>Concentración del disolvente:</b>	
<b>Disolventes orgánicos:</b>	0.0 %
<b>VOC (CE)</b>	0,00 %
<b>Contenido de cuerpos sólidos:</b>	70.0 %
· <b>9.2 Otros datos</b>	No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad** No existen más datos relevantes disponibles.
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Lesiones o irritación ocular graves**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Sensibilización respiratoria o cutánea**  
Puede provocar una reacción alérgica en la piel.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**  
Se sospecha que provoca defectos genéticos.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

### SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Efectos ecotóxicos:**
- **Observación:** Muy tóxico para peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
Nivel de riesgo para el agua 1 (autoclasiación): escasamente peligroso para el agua  
En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.  
Vertido en aguas superficiales, también es tóxico para los peces y el plancton.  
muy tóxico para organismos acuáticos
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

### SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

### SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN3077
- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 3077 SUSTANCIA SÓLIDA PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P. (4,4'-Methylenebis(N,N-diglycidylaniline))
- **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4,4'-Methylenebis(N,N-diglycidylaniline)), MARINE POLLUTANT
- **IATA** Environmentally hazardous substance, solid, n.o.s. (4,4'-Methylenebis(N,N-diglycidylaniline))

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· **14.3 Clase(s) de peligro para el transporte**

· **ADR, IMDG, IATA**



· **Clase**

9 Materias y objetos peligrosos diversos

· **Etiqueta**

9

· **14.4 Grupo de embalaje**

· **ADR, IMDG, IATA**

III

· **14.5 Peligros para el medio ambiente:**

El producto contiene materias peligrosas para el medio ambiente: 4,4'-Methylenebis(N,N-diglycidylaniline)

· **Contaminante marino:**

Símbolo (pez y árbol)

· **Marcado especial (ADR):**

Símbolo (pez y árbol)

· **Marcado especial (IATA):**

Símbolo (pez y árbol)

· **14.6 Precauciones particulares para los usuarios**

Atención: Materias y objetos peligrosos diversos

· **Número Kemler:**

90

· **Número EMS:**

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 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC**

No aplicable.

· **Transporte/datos adicionales:**

· **ADR**

· **Cantidades limitadas (LQ)**

5 kg

· **Cantidades exceptuadas (EQ)**

Código: E1

Cantidad neta máxima por envase interior: 30 g

Cantidad neta máxima por embalaje exterior: 1000 g

· **Categoría de transporte**

3

· **Código de restricción del túnel**

E

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **"Reglamentación Modelo" de la UNECE:**

UN 3077 SUSTANCIA SÓLIDA PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P. (4,4'-METHYLENEBIS(N,N-DIGLYCIDYLANILINE)), 9, III

## SECCIÓN 15: Información reglamentaria

· **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**

· **Directiva 2012/18/UE**

· **Sustancias peligrosas nominadas - ANEXO I ninguno de los componentes está incluido en una lista**

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- **Categoría Seveso E1** Peligroso para el medio ambiente acuático
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior** 100 t
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior** 200 t
- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

### SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· **Frasas relevantes**

H317 Puede provocar una reacción alérgica en la piel.

H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· **Abreviaturas y acrónimos:**

ADR: Accord européen sur le transport 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

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Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B

Muta. 2: Germ cell mutagenicity, Hazard Category 2

Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2