

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

1 Identification

- **Product identifier**
- **Trade name:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)
- **Article number:** 12642-14 (B)
- **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

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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**



GHS05



GHS07



GHS08

- **Signal word** Danger

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

4-nonylphenol, branched
2-piperazin-1-ylethylamine
bisphenol A

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 1)

2,2'-iminodiethylamine

· **Hazard statements**

- Harmful if swallowed.
- Causes severe skin burns and eye damage.
- May cause an allergic skin reaction.
- Suspected of damaging fertility or the unborn child.

· **Precautionary statements**

- Do not breathe dusts or mists.
- Wear protective gloves.
- Wear eye protection / face protection.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- 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.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a POISON CENTER/doctor.
- Specific treatment (see on this label).
- IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- Wash contaminated clothing before reuse.
- IF exposed or concerned: Get medical advice/attention.
- If skin irritation or rash occurs: Get medical advice/attention.
- If swallowed: Rinse mouth. Do NOT induce vomiting.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *4
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%
84852-15-3	4-nonylphenol, branched	10-25%

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 2)

140-31-8	2-piperazin-1-ylethylamine	2,5-10%
80-05-7	bisphenol A	≤ 2,5%
111-40-0	2,2'-iminodiethylamine	≤ 2,5%

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

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

- **After inhalation:**

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

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

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

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- **After swallowing:**

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a 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:**

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

- **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**

Wear protective equipment. Keep unprotected persons away.

- **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:**

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

- **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.

US

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 3)

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Thorough dedusting.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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/m³

REL Long-term value: 0.01 mg/m³

TLV Long-term value: 0.1 mg/m³
metal: dust and fume

111-40-0 2,2'-iminodiethylamine

REL Long-term value: 4 mg/m³, 1 ppm
Skin

TLV Long-term value: 4.2 mg/m³, 1 ppm
Skin

- **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.

Store protective clothing separately.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

- **Breathing equipment:** Not required.

- **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

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 4)

· **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:**



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Solid
Color:	Silver-colored
Odor:	Amine-like
Odor threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

· **Flash point:** 93 °C (199 °F)

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

· **Ignition temperature:** 315 °C (599 °F)

· **Decomposition temperature:** Not determined.

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

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

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** Not determined.

· **Relative density** Not determined.

· **Vapor density** Not applicable.

· **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

Water: Insoluble.

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

· **Viscosity:**

Dynamic: Not applicable.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 5)

Kinematic at 40 °C (104 °F):	20.5 mm ² /s
· Solvent content:	
Organic solvents:	0.0 %
VOC content:	0.0 g/l / 0.00 lb/gl
· Solids content:	68.0 %
· Other information	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:**

· LD/LC50 values that are relevant for classification:		
140-31-8 2-piperazin-1-ylethylamine		
Oral	LD50	2140 mg/kg (rat)
Dermal	LD50	880 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **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.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 6)

· **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
Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
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

- | | |
|----------------------------------|---|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | UN3263 |
| · UN proper shipping name | |
| · DOT, IATA | Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched) |
| · ADR | 3263 Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched), ENVIRONMENTALLY HAZARDOUS |
| · IMDG | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT |

(Contd. on page 8)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 7)

· **Transport hazard class(es)**

· **DOT**



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

· **ADR, IMDG**



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

· **IATA**



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

· **Packing group**

· **DOT, ADR, IMDG, IATA** II

· **Environmental hazards:** Product contains environmentally hazardous substances: 4-nonylphenol, branched

· **Marine pollutant:** Symbol (fish and tree)

· **Special marking (ADR):** Symbol (fish and tree)

· **Special precautions for user** Warning: Corrosive substances

· **Danger code (Kemler):** 80

· **EMS Number:** F-A,S-B

· **Segregation groups** Alkalis

· **Stowage Category** B

· **Segregation Code** SG35 Stow "separated from" acids.

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

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations** On passenger aircraft/rail: 1 L
 On cargo aircraft only: 30 L

· **ADR**

· **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 g
 Maximum net quantity per outer packaging: 500 g

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 8)

· **IMDG**

- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

1L

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

· **UN "Model Regulation":**

UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-NONYLPHENOL, BRANCHED), 8, II, ENVIRONMENTALLY HAZARDOUS

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
84852-15-3	4-nonylphenol, branched
80-05-7	bisphenol A

· **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:**

80-05-7	bisphenol A
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· **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
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· **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).

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 9)

· **Hazard pictograms**



· **Signal word** *Danger*

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

4-nonylphenol, branched
2-piperazin-1-ylethylamine
bisphenol A
2,2'-iminodiethylamine

· **Hazard statements**

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Suspected of damaging fertility or the unborn child.

· **Precautionary statements**

Do not breathe dusts or mists.
Wear protective gloves.
Wear eye protection / face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
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.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Wash contaminated clothing before reuse.
IF exposed or concerned: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If swallowed: Rinse mouth. Do NOT induce vomiting.
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** 05/24/2016 / -

· **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

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 10)

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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
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
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Repr. 2: Reproductive toxicity, Hazard Category 2

US

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

Printing date 24.05.2016

Revision: 24.05.2016

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

· **Product identifier**

· **Trade name:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

· **Article number:** 12642-14 (B)

· **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

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

· **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

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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

(Contd. on page 2)

AU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 1)

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



GHS05 GHS07 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
 - 4-nonylphenol, branched
 - 2-piperazin-1-ylethylamine
 - bisphenol A
 - 2,2'-iminodiethylamine
- **Hazard statements**
 - Harmful if swallowed.
 - Causes severe skin burns and eye damage.
 - May cause an allergic skin reaction.
 - Suspected of damaging fertility or the unborn child.
- **Precautionary statements**
 - Do not breathe dusts or mists.
 - Wear protective gloves.
 - Wear eye protection / face protection.
 - Wash thoroughly after handling.
 - Do not eat, drink or smoke when using this product.
 - 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.
 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - Immediately call a POISON CENTER/doctor.
 - Specific treatment (see on this label).
 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 - Wash contaminated clothing before reuse.
 - IF exposed or concerned: Get medical advice/attention.
 - If skin irritation or rash occurs: Get medical advice/attention.
 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 - 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.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 2)

· Dangerous components:		
7440-22-4	silver	50-100%
84852-15-3	4-nonylphenol, branched	10-25%
140-31-8	2-piperazin-1-ylethylamine	2,5-10%
80-05-7	bisphenol A	≤ 2,5%
111-40-0	2,2'-iminodiethylamine	≤ 2,5%

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

4 First aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

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

· **After inhalation:**

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

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

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

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Call for a doctor immediately.

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

· **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 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

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

· **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**

Wear protective equipment. Keep unprotected persons away.

· **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:**

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 3)

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Thorough dedusting.
Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **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/m³

111-40-0 2,2'-iminodiethylamine

NES Long-term value: 4.2 mg/m³, 1 ppm
Sk, Sen

- **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.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **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

(Contd. on page 5)

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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 4)

· **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:**



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· Form:	Solid
· Colour:	Silver-coloured
· Odour:	Amine-like
· Odour threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.

· **Flash point:** 93 °C

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

· **Ignition temperature:** 315 °C

· **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.

(Contd. on page 6)

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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 5)

Kinematic at 40 °C:	20.5 mm ² /s
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.00 %
Solids content:	68.0 %
· Other information	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**

- **LD/LC50 values relevant for classification:**

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

Oral	LD50	2140 mg/kg (rat)
Dermal	LD50	880 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **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:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
Repr. 2

12 Ecological information

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

(Contd. on page 7)

AU

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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: **TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)**

(Contd. of page 6)

- **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
Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
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

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · ADG, IMDG, IATA | UN3263 |
| <ul style="list-style-type: none"> · UN proper shipping name · ADG · IMDG · IATA | 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), ENVIRONMENTALLY HAZARDOUS

CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT

Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched) |
| <ul style="list-style-type: none"> · Transport hazard class(es) · ADG, IMDG |  |
| <ul style="list-style-type: none"> · Class | 8 Corrosive substances. |

(Contd. on page 8)


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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: **TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)**

(Contd. of page 7)

· Label	8
· IATA	
	
· Class	8 Corrosive substances.
· Label	8
· Packing group	
· ADG, IMDG, IATA	II
· Environmental hazards:	Product contains environmentally hazardous substances: 4-nonylphenol, branched
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADG):	Symbol (fish and tree)
· Special precautions for user	Warning: Corrosive substances.
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Segregation groups	Alkalis
· Stowage Category	B
· Segregation Code	SG35 Stow "separated from" acids.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADG	
· Limited quantities (LQ)	1 kg
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-NONYLPHENOL, BRANCHED), 8, II, ENVIRONMENTALLY HAZARDOUS

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

(Contd. on page 9)

AU

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 8)

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

· **Hazard pictograms**



GHS05 GHS07 GHS08

· **Signal word** *Danger*

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

4-nonylphenol, branched

2-piperazin-1-ylethylamine

bisphenol A

2,2'-iminodiethylamine

· **Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child.

· **Precautionary statements**

Do not breathe dusts or mists.

Wear protective gloves.

Wear eye protection / face protection.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

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

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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.

(Contd. on page 10)

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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 9)

· 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

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

Repr. 2: Reproductive toxicity, Hazard Category 2

AU

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

1 Identification

- **Product identifier**
- **Trade name:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)
- **Article number:** 12642-14 (B)
- **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

Reproductive Toxicity - Category 2 H361-H362 Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.



GHS05 Corrosion

Skin Corrosion - Category 1B H314 Causes severe skin burns and eye damage.
Serious Eye Damage - Category 1 H318 Causes serious eye damage.



GHS07

Acute Toxicity (Oral) - Category 4 H302 Harmful if swallowed.
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**



GHS05



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
4-nonylphenol, branched
2-piperazin-1-ylethylamine

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 1)

bisphenol A

2,2'-iminodiethylamine

· **Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.

· **Precautionary statements**

Avoid contact during pregnancy and while nursing.

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

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

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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:**

D2A - Very toxic material causing other toxic effects

E - Corrosive material



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *4

Fire = 1

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 2)

· **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
111-40-0	2,2'-iminodiethylamine	≤ 1% w/w

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a 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:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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**
Wear protective equipment. Keep unprotected persons away.
- **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:**
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 3)

- **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**
Thorough dedusting.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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 ³ Long-term value: 0.01 mg/m ³ as Ag
EV	Long-term value: 0.1* 0.01** mg/m ³ *metal; **water-soluble compounds (as silver)

111-40-0 2,2'-iminodiethylamine

EL	Long-term value: 1 ppm Skin; S
EV	Long-term value: 4 mg/m ³ , 1 ppm Skin

- **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.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.

(Contd. on page 5)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 4)

· **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:**



Tightly sealed goggles

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

Form:	Solid
Color:	Silver-colored
Odor:	Amine-like
Odor threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

· **Flash point:** 93 °C

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

· **Ignition temperature:** 315 °C

· **Decomposition temperature:** Not determined.

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

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

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure:** Not applicable.

· **Density:** Not determined.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 5)

· Relative density	Not determined.
· Vapor 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 at 40 °C:	20.5 mm ² /s
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	68.0 %
· Other information	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:**

· **LD/LC50 values that are relevant for classification:**

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

Oral	LD50	2140 mg/kg (rat)
Dermal	LD50	880 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

(Contd. on page 7)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 6)

· **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.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Ecotoxic effects:**

· **Remark:**

Very toxic for fish

Toxic for fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

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

· **UN-Number**

· **DOT, TDG, IMDG, IATA**

UN3263

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 7)

· **UN proper shipping name**
 · **DOT, IATA**
 · **TDG**
 · **IMDG**

Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched)
3263 Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched), ENVIRONMENTALLY HAZARDOUS
CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT

· **Transport hazard class(es)**

· **DOT**



· **Class**
 · **Label**
 · **TDG, IMDG**

8 Corrosive substances
8



· **Class**
 · **Label**

8 Corrosive substances
8

· **IATA**



· **Class**
 · **Label**

8 Corrosive substances
8

· **Packing group**

· **DOT, TDG, IMDG, IATA** *II*

· **Environmental hazards:** *Product contains environmentally hazardous substances: 4-nonylphenol, branched*
 · **Marine pollutant:** *Symbol (fish and tree)*
 · **Special marking (TDG):** *Symbol (fish and tree)*

· **Special precautions for user** *Warning: Corrosive substances*
 · **Danger code (Kemler):** *80*
 · **EMS Number:** *F-A,S-B*
 · **Segregation groups** *Alkalis*
 · **Stowage Category** *B*
 · **Segregation Code** *SG35 Stow "separated from" acids.*

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

· **Transport/Additional information:**

· **DOT**
 · **Quantity limitations**

On passenger aircraft/rail: 1 L
On cargo aircraft only: 30 L

(Contd. on page 9)

CA

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 8)

<ul style="list-style-type: none"> · TDG · Excepted quantities (EQ) 	<p>Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1L Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-NONYLPHENOL, BRANCHED), 8, II, ENVIRONMENTALLY HAZARDOUS</p>

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
-----------	--------

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

80-05-7	bisphenol A
---------	-------------

- **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:**

80-05-7	bisphenol A
---------	-------------

- **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.

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 9)

· **Canadian substance listings:**

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

All ingredients are listed.

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

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

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

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

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

80-05-7	bisphenol A
---------	-------------

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

· **Hazard pictograms**



GHS05

GHS07

GHS08

· **Signal word** Danger

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

4-nonylphenol, branched

2-piperazin-1-ylethylamine

bisphenol A

2,2'-iminodiethylamine

· **Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.

· **Precautionary statements**

Avoid contact during pregnancy and while nursing.

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

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

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Take off contaminated clothing and wash it before reuse.

Store locked up.

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

(Contd. on page 11)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/24/2016

Reviewed on 05/24/2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 10)

· **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** 05/24/2016 / -

· **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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

Acute Toxicity (Oral) - Category 4: Acute toxicity, Hazard Category 4

Skin Corrosion - Category 1B: Skin corrosion/irritation, Hazard Category 1B

Serious Eye Damage - Category 1: Serious eye damage/eye irritation, Hazard Category 1

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

Reproductive Toxicity - Category 2: Reproductive toxicity, Hazard Category 2

-CA-

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

Printing date 24.05.2016

Revision: 24.05.2016

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 B)**
- **Article number:** 12642-14 (B)
- **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
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

Repr. 2 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.



GHS05 corrosion

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



GHS09 environment

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.
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.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: **TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)**

(Contd. of page 1)

· **Hazard pictograms**

GHS05 GHS07 GHS08 GHS09

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

4-nonylphenol, branched
 2-piperazin-1-ylethylamine
 2,2'-iminodiethylamine
 bisphenol A

· **Hazard statements**

H302 Harmful if swallowed.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
 H410 Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**

P303+P361+P353 **IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P321 Specific treatment (see on this label).
 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 EINECS: 231-131-3	silver substance with a Community workplace exposure limit	50-100%
CAS: 84852-15-3 EINECS: 284-325-5	4-nonylphenol, branched ⚠ Repr. 2, H361fd; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	10-25%
CAS: 140-31-8 EINECS: 205-411-0	2-piperazin-1-ylethylamine ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	2,5-10%

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 2)

CAS: 80-05-7 EINECS: 201-245-8	bisphenol A ⚠ Repr. 2, H361f; ⚠ Eye Dam. 1, H318; ⚠ Skin Sens. 1, H317; STOT SE 3, H335	≤ 2,5%
CAS: 111-40-0 EINECS: 203-865-4	2,2'-iminodiethylamine ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	≤ 2,5%

· **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**

· **General information:**

Immediately remove any clothing soiled by the product.

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

· **After inhalation:**

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

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

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

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Call for a doctor immediately.

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

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

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

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

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

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

· **5.3 Advice for firefighters**

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

SECTION 6: Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

· **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:**

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Contd. on page 4)

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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: **TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)**

(Contd. of page 3)

See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Thorough dedusting.
Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

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 silverWEL Long-term value: 0.1 mg/m³**80-05-7 bisphenol A**WEL Long-term value: 10 mg/m³
inhalable dust**111-40-0 2,2'-iminodiethylamine**WEL Long-term value: 4.3 mg/m³, 1 ppm
Sk

- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **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.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not required.
- **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

(Contd. on page 5)

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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: **TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)**

(Contd. of page 4)

- **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:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	Solid
Colour:	Silver-coloured
Odour:	Amine-like
Odour threshold:	Not determined.

- **pH-value:** Not applicable.

- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

- **Flash point:** 93 °C

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

- **Ignition temperature:** 315 °C

- **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.

(Contd. on page 6)

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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 5)

Kinematic at 40 °C:	20.5 mm ² /s
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.00 %
Solids content:	68.0 %
· 9.2 Other information	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**
Harmful if swallowed.

· LD/LC50 values relevant for classification:

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

Oral	LD50	2140 mg/kg (rat)
Dermal	LD50	880 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity**
Suspected of damaging fertility. Suspected of damaging the unborn child.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

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.

(Contd. on page 7)

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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 6)

- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Very toxic for fish
Toxic for fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Must not reach sewage water or drainage ditch undiluted or unneutralised.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **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

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | UN3263 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG · IATA | 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), ENVIRONMENTALLY HAZARDOUS
CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT
Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched) |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG | |
| <ul style="list-style-type: none"> · Class | 8 Corrosive substances. |



(Contd. on page 8)


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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: **TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)**

(Contd. of page 7)

· Label	8
· IATA	
	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group · ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances: 4-nonylphenol, branched
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: · Segregation groups · Stowage Category · Segregation Code	Warning: Corrosive substances. 80 F-A,S-B Alkalis B SG35 Stow "separated from" acids.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· Transport category · Tunnel restriction code	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-NONYLPHENOL, BRANCHED), 8, II, ENVIRONMENTALLY HAZARDOUS

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

(Contd. on page 9)

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

Printing date 24.05.2016

Revision: 24.05.2016

Trade name: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Contd. of page 8)

· **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**

- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.
- H361f Suspected of damaging fertility.
- H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H412 Harmful 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Repr. 2: Reproductive toxicity, Hazard Category 2
- Repr. 2: Reproductive toxicity, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
- Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

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 B)

· **Artikelnummer:** 12642-14 (B)

· 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

www.emsdiasum.com

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: 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

Repr. 2

H361fd Wordt ervan verdacht de vruchtbaarheid te schaden. Wordt ervan verdacht het ongeboren kind te schaden.



GHS05 corrosie

Skin Corr. 1B

H314

Veroorzaakt ernstige brandwonden en oogletsel.

Eye Dam. 1

H318

Veroorzaakt ernstig oogletsel.



GHS09 milieu

Aquatic Chronic 1

H410

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



GHS07

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Vervolg van blz. 1)

Acute Tox. 4 H302 Schadelijk bij inslikken.
 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.

· Gevarenpictogrammen



GHS05 GHS07 GHS08 GHS09

· Signaalwoord Gevaar

· Gevaaraanduidende componenten voor de etikettering:

4-nonylfenol-, vertakt
 2-piperazine-1-ylethylamine
 1,5-diamino-3-azapentaaan
 4,4'-isopropylideendifenol

· Gevarenaanduidingen

H302 Schadelijk bij inslikken.
 H314 Veroorzaakt ernstige brandwonden en oogletsels.
 H317 Kan een allergische huidreactie veroorzaken.
 H361fd Wordt ervan verdacht de vruchtbaarheid te schaden. Wordt ervan verdacht het ongeboren kind te schaden.
 H410 Zeer giftig voor in het water levende organismen, met langdurige gevolgen.

· Veiligheidsaanbevelingen

P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken. Huid met water afspoelen/afdouchen.
 P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.
 P310 Onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.
 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	

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Vervolg van blz. 2)

CAS: 84852-15-3 EINECS: 284-325-5	4-nonylfenol-, vertakt ⚠ Repr. 2, H361fd; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	10-25%
CAS: 140-31-8 EINECS: 205-411-0	2-piperazine-1-ylethylamine ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	2,5-10%
CAS: 80-05-7 EINECS: 201-245-8	4,4'-isopropylideendifenol ⚠ Repr. 2, H361f; ⚠ Eye Dam. 1, H318; ⚠ Skin Sens. 1, H317; STOT SE 3, H335	≤ 2,5%
CAS: 111-40-0 EINECS: 203-865-4	1,5-diamino-3-azapentaan ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	≤ 2,5%

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
Algemene informatie:

Verontreinigde kleding onmiddellijk uittrekken.

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

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 met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.

Na inslikken:

Onmiddellijk arts raadplegen.

Drink zeer veel water en voer verse lucht aan. Onmiddellijk een dokter waarschuwen.

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

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:

 CO₂, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.

5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt

Geen verdere relevante informatie verkrijgbaar.

5.3 Advies voor brandweertieners
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

Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.

(Vervolg op blz. 4)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Vervolg van blz. 3)

- **6.2 Milieuvorzorgsmaatregelen:**
Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.
Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 InsluTINGS- en reinigingsmethoden en -materiaal:**
Neutralisatiemiddel gebruiken.
Besmet materiaal zoals afval volgens punt 13 verwijderen.
Voor voldoende ventilatie zorgen.
- **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**
Goed stofvrij maken.
Tanks voorzichtig openen en behandelen.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Ademhalingstoestellen gereedhouden.
- **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:** Tanks ondoordringbaar gesloten houden.
- **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/m³

80-05-7 4,4'-isopropylideendifenol

WGW | Lange termijn waarde: 10 ppm
inhaleerbaar

- **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.
Verontreinigde kleding onmiddellijk uittrekken.
Vóór de pauze en aan het einde van werktijd handen wassen.
Beschermende kleding afzonderlijk bewaren.
Aanraking met de ogen vermijden.
Aanraking met de ogen en de huid vermijden.
- **Ademhalingsbescherming:** Niet noodzakelijk.

(Vervolg op blz. 5)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Vervolg van blz. 4)

· 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:

Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

· 9.1 Informatie over fysische en chemische basiseigenschappen
· Algemene gegevens
· Voorkomen:

Vorm:	Vast
Kleur:	Zilverkleurig
Reuk:	Amine-achtig
Geurdrempelwaarde:	Niet bepaald.

· pH-waarde: Niet bruikbaar.

· Toestandsverandering

Smeltpunt/smeltbereik:	Niet bepaald.
Kookpunt/kookpuntbereik:	Niet bepaald.

· Vlampunt: 93 °C

· Ontvlambaarheid (vast, gasvormig): Niet bepaald.

· Ontstekingstemperatuur: 315 °C

· 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.

Dichtheid: Niet bepaald.

(Vervolg op blz. 6)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Vervolg van blz. 5)

· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bruikbaar.
· Verdampingssnelheid	Niet bruikbaar.
· Oplosbaarheid in/mengbaarheid met Water:	Niet oplosbaar.
· Verdelingscoëfficiënt (n-octanol/water):	Niet bepaald.
· Viscositeit	
Dynamisch:	Niet bruikbaar.
Kinematisch bij 40 °C:	20.5 mm ² /s
· Oplosmiddelgehalte:	
Organisch oplosmiddel:	0.0 %
VOC (EG)	0,00 %
Gehalte aan vaste bestanddelen:	68.0 %
· 9.2 Overige informatie	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**
Schadelijk bij inslikken.

· Indelingsrelevantie LD/LC50-waarden:

140-31-8 2-piperazine-1-ylethylamine

Oraal	LD50	2140 mg/kg (rat)
Dermaal	LD50	880 mg/kg (rabbit)

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie**
Veroorzaakt ernstige brandwonden en oogletsel.
- **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstig oogletsel.
- **Sensibilisatie van de luchtwegen/de huid**
Kan een allergische huidreactie veroorzaken.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting**
Wordt ervan verdacht de vruchtbaarheid te schaden. Wordt ervan verdacht het ongeboren kind te schaden.
- **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.

(Vervolg op blz. 7)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Vervolg van blz. 6)

- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

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.
 - Giftig voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
 - Waterbezwaarlijkheid (NL) 1: Zwarte lijst-stof (76/464/EEG).
 - Gevaar voor water klasse 3 (D) (Zelfclassificatie): gevaar voor water groot
 - Niet lozen in grondwater, oppervlaktewater of riolering, ook niet in kleine hoeveelheden.
 - Mag niet onverdund of niet geneutraliseerd in oppervlaktewater of in afwateringskanaal geloosd worden.
 - Gevaar voor drinkwater zelfs bij het uitlopen van zeer geringe hoeveelheden in de ondergrond.
 - In oppervlaktewater ook giftig voor vissen en plankton.
 - zeer giftig voor in het water levende organismen
 - 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 terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.1 VN-nummer**
- **ADR, IMDG, IATA** UN3263
- **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**
- **ADR** 3263 BIJTENDE BASISCHE ORGANISCHE VASTE STOF, N.E.G. (4-nonylphenol-, vertakt), MILIEUGEVAARLIJK
- **IMDG** CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT
- **IATA** Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched)

(Vervolg op blz. 8)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Vervolg van blz. 7)

· 14.3 Transportgevaarenklasse(n)
· ADR, IMDG


· **klasse** 8 Bijtende stoffen
 · **Etiket** 8

· IATA


· **Class** 8 Bijtende stoffen
 · **Label** 8

· 14.4 Verpakkingsgroep:

· **ADR, IMDG, IATA** II

· 14.5 Milieugevaren:

· **Marine pollutant:** *Produkt bevat milieugevaarlijke stoffen: 4-nonylfenol-, vertakt*
 · **Bijzondere kenmerking (ADR):** *Symbool (vis en boom)*
Symbool (vis en boom)

· 14.6 Bijzondere voorzorgen voor de gebruiker

· **Kemler-getal:** *Waarschuwing: Bijtende stoffen*
 80
 · **EMS-nummer:** *F-A,S-B*
 · **Segregation groups** *Alkalis*
 · **Stowage Category** *B*
 · **Segregation Code** *SG35 Stow "separated from" acids.*

· 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code

Niet bruikbaar.

· Transport/verdere gegevens:

· **ADR**
 · **Beperkte hoeveelheden (LQ)** 1 kg
 · **Uitzonderde hoeveelheden (EQ)** Code: E2
Grootste netto hoeveelheid per binnenverpakking: 30 g
Grootste netto hoeveelheid per buitenverpakking: 500 g
 · **Vervoerscategorie** 2
 · **Tunnelbeperkingscode** E

· IMDG

· **Limited quantities (LQ)** 1L
 · **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 500 g

(Vervolg op blz. 9)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Vervolg van blz. 8)

- | | |
|--------------------------|---|
| · VN "Model Regulation": | UN 3263 BIJTENDE BASISCHE ORGANISCHE VASTE STOF, N.E.G. (4-NONYLFENOL-, VERTAKT), 8, II, MILIEUGEVAARLIJK |
|--------------------------|---|

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**

84852-15-3	4-nonylfenol-, vertakt	3
80-05-7	4,4'-isopropylideendifenol	3

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

84852-15-3	4-nonylfenol-, vertakt	3
------------	------------------------	---

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

geen der bestanddelen staat op de lijst.

- **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**

H302 Schadelijk bij inslikken.

H312 Schadelijk bij contact met de huid.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

H317 Kan een allergische huidreactie veroorzaken.

H318 Veroorzaakt ernstig oogletsel.

H335 Kan irritatie van de luchtwegen veroorzaken.

H361f Wordt ervan verdacht de vruchtbaarheid te schaden.

H361fd Wordt ervan verdacht de vruchtbaarheid te schaden. Wordt ervan verdacht het ongeboren kind te schaden.

H400 Zeer giftig voor in het water levende organismen.

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

H412 Schadelijk 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)

(Vervolg op blz. 10)

**Veiligheidsinformatieblad
volgens 1907/2006/EG, Artikel 31**

datum van de druk: 24.05.2016

Herziening van: 24.05.2016

Handelsnaam: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Vervolg van blz. 9)

IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Repr. 2: Reproductive toxicity, Hazard Category 2
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

NL

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.05.2016

Révision: 24.05.2016

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 B)
- **Code du produit:** 12642-14 (B)
- **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
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

Repr. 2 H361fd Susceptible de nuire à la fertilité. Susceptible de nuire au fœtus.



GHS05 corrosion

Skin Corr. 1B H314 Provoque des brûlures de la peau et des lésions oculaires graves.

Eye Dam. 1 H318 Provoque des lésions oculaires graves.



GHS09 environnement

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



GHS07

Acute Tox. 4 H302 Nocif en cas d'ingestion.

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.

(suite page 2)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.05.2016

Révision: 24.05.2016

Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(suite de la page 1)

· Pictogrammes de danger



GHS05 GHS07 GHS08 GHS09

· Mention d'avertissement Danger

· Composants dangereux déterminants pour l'étiquetage:

4-nonylphénol, ramifié
2-pipérazine-1-yléthylamine
3-azapentane-1,5-diamine
bisphénol A

· Mentions de danger

H302 Nocif en cas d'ingestion.
H314 Provoque des brûlures de la peau et des lésions oculaires graves.
H317 Peut provoquer une allergie cutanée.
H361fd Susceptible de nuire à la fertilité. Susceptible de nuire au fœtus.
H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.

· Conseils de prudence

P303+P361+P353 EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux): Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau/Se doucher.
P305+P351+P338 EN CAS DE CONTACT AVEC LES YEUX: rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.
P310 Appeler immédiatement un CENTRE ANTIPOISON/un médecin.
P321 Traitement spécifique (voir sur cette étiquette).
P405 Garder sous clef.
P501 Éliminer le contenu/récipient 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 EINECS: 231-131-3	argent substance pour laquelle il existe, en vertu des dispositions communautaires, des limites d'exposition sur le lieu de travail	50-100%
CAS: 84852-15-3 EINECS: 284-325-5	4-nonylphénol, ramifié ⚠ Repr. 2, H361fd; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	10-25%
CAS: 140-31-8 EINECS: 205-411-0	2-pipérazine-1-yléthylamine ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	2,5-10%

(suite page 3)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.05.2016

Révision: 24.05.2016

Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

		(suite de la page 2)
CAS: 80-05-7 EINECS: 201-245-8	bisphénol A ⚠ Repr. 2, H361f; ⚠ Eye Dam. 1, H318; ⚠ Skin Sens. 1, H317; STOT SE 3, H335	≤ 2,5%
CAS: 111-40-0 EINECS: 203-865-4	3-azapentane-1,5-diamine ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	≤ 2,5%

· **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**

· **Remarques générales:**

Enlever immédiatement les vêtements contaminés par le produit.

Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.

· **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, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières et consulter un médecin.

· **Après ingestion:**

Consulter immédiatement un médecin.

Boire de l'eau en abondance et donner de l'air frais. Consulter immédiatement 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:**

CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.

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

Pas d'autres informations importantes disponibles.

· **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**

Porter un équipement de sécurité. Eloigner les personnes non protégées.

· **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:**

Utiliser un neutralisant.

Evacuer les matériaux contaminés en tant que déchets conformément au point 13.

Assurer une aération suffisante.

(suite page 4)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.05.2016

Révision: 24.05.2016

Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(suite de la page 3)

· **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**

Bien dépoussiérer.

Ouvrir et manipuler les récipients avec précaution.

· **Préventions des incendies et des explosions:** Tenir des appareils de protection respiratoire prêts.

· **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:** Tenir les emballages hermétiquement fermés.

· **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:**

7440-22-4 argent

VME Valeur à long terme: 0,1 mg/m³

80-05-7 bisphénol A

VME Valeur à long terme: 10 mg/m³

R2, poussières inhalables

111-40-0 3-azapentane-1,5-diamine

VME Valeur à long terme: 4 mg/m³, 1 ppm

AC

· **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.

Conserver à part les vêtements de protection.

Éviter tout contact avec les yeux.

Éviter tout contact avec les yeux et avec la peau.

· **Protection respiratoire:** N'est pas nécessaire.

(suite page 5)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.05.2016

Révision: 24.05.2016

Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(suite de la page 4)

· **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:**



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

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

· **Indications générales**

· **Aspect:**

Forme:	Solide
Couleur:	Argenté
Odeur:	Aminée
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** 93 °C

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

· **Température d'inflammation:** 315 °C

· **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.

(suite page 6)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.05.2016

Révision: 24.05.2016

Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(suite de la page 5)

· Densité relative	Non déterminé.
· Densité de vapeur.	Non applicable.
· Vitesse d'évaporation	Non applicable.
· Solubilité dans/miscibilité avec l'eau:	Insoluble
· Coefficient de partage (n-octanol/eau):	Non déterminé.
· Viscosité:	
Dynamique:	Non applicable.
Cinématique à 40 °C:	20.5 mm ² /s
· Teneur en solvants:	
Solvants organiques:	0.0 %
VOC (CE)	0,00 %
Teneur en substances solides:	68.0 %
· 9.2 Autres informations	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**
Nocif en cas d'ingestion.

· **Valeurs LD/LC50 déterminantes pour la classification:**

140-31-8 2-pipérazine-1-yléthylamine

Oral	LD50	2140 mg/kg (rat)
Dermique	LD50	880 mg/kg (lapin)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Provoque des brûlures de la peau et des lésions oculaires graves.
- **Lésions oculaires graves/irritation oculaire**
Provoque des lésions oculaires graves.
- **Sensibilisation respiratoire ou cutanée**
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**
Susceptible de nuire à la fertilité. Susceptible de nuire au fœtus.

(suite page 7)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.05.2016

Révision: 24.05.2016

Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(suite de la page 6)

- **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.

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.
Toxique chez les poissons.
- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 3 (D) (Classification propre): très polluant
Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations, même pas en petite quantité.
Ne doit pas pénétrer à l'état non dilué ou non neutralisé dans les eaux usées ou le collecteur.
Danger pour l'eau potable dès fuite d'une quantité minimale dans le sous-sol.
Dans les eaux, également toxique pour les poissons et le plancton.
Très toxique pour organismes aquatiques.
Toxique pour les 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"> · 14.1 Numéro ONU · ADR, IMDG, IATA | UN3263 |
| <ul style="list-style-type: none"> · 14.2 Désignation officielle de transport de l'ONU · ADR | 3263 SOLIDE ORGANIQUE CORROSIF, BASIQUE, N.S.A. (4-nonylphénol, ramifié), DANGEREUX POUR L'ENVIRONNEMENT |
| <ul style="list-style-type: none"> · IMDG | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT |

(suite page 8)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.05.2016

Révision: 24.05.2016

Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(suite de la page 7)

· **IATA** Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched)

· **14.3 Classe(s) de danger pour le transport**

· **ADR, IMDG**



· **Classe** 8 Matières corrosives.
 · **Étiquette** 8

· **IATA**



· **Class** 8 Matières corrosives.
 · **Label** 8

· **14.4 Groupe d'emballage**

· **ADR, IMDG, IATA** II

· **14.5 Dangers pour l'environnement:**

· **Marine Pollutant:**

· **Marquage spécial (ADR):**

Le produit contient matières dangereuses pour l'environnement : 4-nonylphénol, ramifié
Signe conventionnel (poisson et arbre)
Signe conventionnel (poisson et arbre)

· **14.6 Précautions particulières à prendre par l'utilisateur**

· **Indice Kemler:**

· **No EMS:**

· **Segregation groups**

· **Stowage Category**

· **Segregation Code**

Attention: Matières corrosives.

80

F-A,S-B

Alkalis

B

SG35 Stow "separated from" acids.

· **14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC**

Non applicable.

· **Indications complémentaires de transport:**

· **ADR**

· **Quantités limitées (LQ)**

· **Quantités exceptées (EQ)**

1 kg

Code: E2

Quantité maximale nette par emballage intérieur: 30 g

Quantité maximale nette par emballage extérieur: 500 g

· **Catégorie de transport**

2

· **Code de restriction en tunnels**

E

· **IMDG**

· **Limited quantities (LQ)**

· **Excepted quantities (EQ)**

1L

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

(suite page 9)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 24.05.2016

Révision: 24.05.2016

Nom du produit: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(suite de la page 8)

· "Règlement type" de l'ONU:	UN 3263 SOLIDE ORGANIQUE CORROSIF, BASIQUE, N.S.A. (4-NONYLPHÉNOL, RAMIFIÉ), 8, II, DANGEREUX POUR L'ENVIRONNEMENT
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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**
- **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**
- H302 Nocif en cas d'ingestion.
- H312 Nocif par contact cutané.
- H314 Provoque des brûlures de la peau et des lésions oculaires graves.
- H317 Peut provoquer une allergie cutanée.
- H318 Provoque des lésions oculaires graves.
- H335 Peut irriter les voies respiratoires.
- H361f Susceptible de nuire à la fertilité.
- H361fd Susceptible de nuire à la fertilité. Susceptible de nuire au fœtus.
- H400 Très toxique pour les organismes aquatiques.
- H410 Très toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.
- H412 Nocif 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Repr. 2: Reproductive toxicity, Hazard Category 2
- Repr. 2: Reproductive toxicity, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
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Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

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

- **1.1 Produktidentifikator**
- **Handelsname:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)
- **Artikelnummer:** 12642-14 (B)
- **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

Repr. 2

H361fd Kann vermutlich die Fruchtbarkeit beeinträchtigen. Kann vermutlich das Kind im Mutterleib schädigen.



GHS05 Ätzwirkung

Skin Corr. 1B

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

Eye Dam. 1

H318 Verursacht schwere Augenschäden.



GHS09 Umwelt

Aquatic Chronic 1 H410

Sehr giftig für Wasserorganismen mit langfristiger Wirkung.

(Fortsetzung auf Seite 2)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 24.05.2016

überarbeitet am: 24.05.2016

Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Fortsetzung von Seite 1)



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.
 Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

· 2.2 Kennzeichnungselemente

· Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

· Gefahrenpiktogramme



GHS05 GHS07 GHS08 GHS09

· Signalwort Gefahr

· Gefahrbestimmende Komponenten zur Etikettierung:

4-Nonyl-,Phenol, verzweigt [2]

2-Piperazin-1-ylethylamin

3-Azapentan-1,5-diamin

Bisphenol A

· Gefahrenhinweise

H302 Gesundheitsschädlich bei Verschlucken.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

H317 Kann allergische Hautreaktionen verursachen.

H361fd Kann vermutlich die Fruchtbarkeit beeinträchtigen. Kann vermutlich das Kind im Mutterleib schädigen.

H410 Sehr giftig für Wasserorganismen mit langfristiger Wirkung.

· Sicherheitshinweise

P303+P361+P353 BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen/duschen.

P305+P351+P338 BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.

P310 Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.

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.

(Fortsetzung auf Seite 3)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 24.05.2016

überarbeitet am: 24.05.2016

Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Fortsetzung von Seite 2)

· 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: 84852-15-3 EINECS: 284-325-5	4-Nonyl-,Phenol, verzweigt [2] ⚠ Repr. 2, H361fd; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	10-25%
CAS: 140-31-8 EINECS: 205-411-0	2-Piperazin-1-ylethylamin ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	2,5-10%
CAS: 80-05-7 EINECS: 201-245-8	Bisphenol A ⚠ Repr. 2, H361f; ⚠ Eye Dam. 1, H318; ⚠ Skin Sens. 1, H317; STOT SE 3, H335	≤ 2,5%
CAS: 111-40-0 EINECS: 203-865-4	3-Azapentan-1,5-diamin ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	≤ 2,5%

· **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**

· **Allgemeine Hinweise:**

Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

· **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 unter fließendem Wasser abspülen und Arzt konsultieren.

· **Nach Verschlucken:**

Sofort Arzt aufsuchen.

Reichlich Wasser nachtrinken und Frischluftzufuhr. Unverzüglich Arzt hinzuziehen.

· **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:**

CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.

· **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**

Keine weiteren relevanten Informationen verfügbar.

(Fortsetzung auf Seite 4)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 24.05.2016

überarbeitet am: 24.05.2016

Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Fortsetzung von Seite 3)

- **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**
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **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:**
Neutralisationsmittel anwenden.
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.
Für ausreichende Lüftung sorgen.
- **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**
Gute Entstaubung.
Behälter mit Vorsicht öffnen und handhaben.
- **Hinweise zum Brand- und Explosionsschutz:** Atemschutzgeräte bereithalten.
- **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:** Behälter dicht geschlossen halten.
- **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.
- **8.1 Zu überwachende Parameter**

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

7440-22-4 Silber	
AGW	Langzeitwert: 0,1 E mg/m ³ 8(II);DFG, EU
80-05-7 Bisphenol A	
AGW	Langzeitwert: 5 E mg/m ³ 1(I);DFG, EU, Y
111-40-0 3-Azapentan-1,5-diamin	
MAK	vgl.Abschn.IV

(Fortsetzung auf Seite 5)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 24.05.2016

überarbeitet am: 24.05.2016

Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Fortsetzung von Seite 4)

· **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.

Getrennte Aufbewahrung der Schutzkleidung.

Berührung mit den Augen vermeiden.

Berührung mit den Augen und der Haut vermeiden.

· **Atemschutz:** Nicht erforderlich.

· **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:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

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

· **Allgemeine Angaben**

· **Aussehen:**

· **Form:** Fest

· **Farbe:** Silberfarben

· **Geruch:** Aminartig

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht anwendbar.

· **Zustandsänderung**

· **Schmelzpunkt/Schmelzbereich:** Nicht bestimmt.

· **Siedepunkt/Siedebereich:** Nicht bestimmt.

· **Flammpunkt:** 93 °C

(Fortsetzung auf Seite 6)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 24.05.2016

überarbeitet am: 24.05.2016

Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Fortsetzung von Seite 5)

· Entzündlichkeit (fest, gasförmig):	Nicht bestimmt.
· Zündtemperatur:	315 °C
· Zersetzungstemperatur:	Nicht bestimmt.
· Selbstentzündlichkeit:	Das Produkt ist nicht selbstentzündlich.
· Explosionsgefahr:	Das Produkt ist nicht explosionsgefährlich.
· Explosionsgrenzen:	
Untere:	Nicht bestimmt.
Obere:	Nicht bestimmt.
· Dampfdruck:	Nicht anwendbar.
· Dichte:	Nicht bestimmt.
· Relative Dichte	Nicht bestimmt.
· Dampfdichte	Nicht anwendbar.
· Verdampfungsgeschwindigkeit	Nicht anwendbar.
· Löslichkeit in / Mischbarkeit mit Wasser:	Unlöslich.
· Verteilungskoeffizient (n-Octanol/Wasser):	Nicht bestimmt.
· Viskosität:	
Dynamisch:	Nicht anwendbar.
Kinematisch bei 40 °C:	20.5 mm ² /s
· Lösemittelgehalt:	
Organische Lösemittel:	0.0 %
VOC (EU)	0,00 %
Festkörpergehalt:	68.0 %
· 9.2 Sonstige Angaben	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**
Gesundheitsschädlich bei Verschlucken.

· Einstufungsrelevante LD/LC50-Werte:		
140-31-8 2-Piperazin-1-ylethylamin		
Oral	LD50	2140 mg/kg (rat)

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 24.05.2016

überarbeitet am: 24.05.2016

Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Fortsetzung von Seite 6)

Derma	LD50	880 mg/kg (rabbit)
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- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**
Verursacht schwere Verätzungen der Haut und schwere Augenschäden.
- **Schwere Augenschädigung/-reizung**
Verursacht schwere Augenschäden.
- **Sensibilisierung der Atemwege/Haut**
Kann allergische Hautreaktionen verursachen.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität**
Kann vermutlich die Fruchtbarkeit beeinträchtigen. Kann vermutlich das Kind im Mutterleib schädigen.
- **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.
Giftig für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 3 (Selbsteinstufung): stark wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen, auch nicht in kleinen Mengen.
Darf nicht unverdünnt bzw. unneutralisiert ins Abwasser bzw. in den Vorfluter gelangen.
Trinkwassergefährdung bereits beim Auslaufen geringster Mengen in den Untergrund.
In Gewässern auch giftig für Fische und Plankton.
sehr giftig für Wasserorganismen
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.

(Fortsetzung auf Seite 8)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 24.05.2016




überarbeitet am: 24.05.2016

Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Fortsetzung von Seite 7)

- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

ABSCHNITT 14: Angaben zum Transport

<ul style="list-style-type: none"> · 14.1 UN-Nummer · ADR, IMDG, IATA 	UN3263
<ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG · IATA 	3263 ÄTZENDER BASISCHER ORGANISCHER FESTER STOFF, N.A.G. (4-Nonyl-,Phenol, verzweigt [2]), UMWELTGEFÄHRDEND CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched)
<ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG 	<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <ul style="list-style-type: none"> · Klasse · Gefahrzettel
<ul style="list-style-type: none"> · IATA 	<div style="display: flex; justify-content: space-around; align-items: center;">  </div> <ul style="list-style-type: none"> · Class · Label
<ul style="list-style-type: none"> · 14.4 Verpackungsgruppe · ADR, IMDG, IATA 	II
<ul style="list-style-type: none"> · 14.5 Umweltgefahren: · Marine pollutant: · Besondere Kennzeichnung (ADR): 	Das Produkt enthält umweltgefährdende Stoffe: 4-Nonyl-,Phenol, verzweigt [2] Symbol (Fisch und Baum) Symbol (Fisch und Baum)
<ul style="list-style-type: none"> · 14.6 Besondere Vorsichtsmaßnahmen für den Verwender · Kemler-Zahl: · EMS-Nummer: · Segregation groups · Stowage Category · Segregation Code 	Achtung: Ätzende Stoffe 80 F-A,S-B Alkalis B SG35 Stow "separated from" acids.
<ul style="list-style-type: none"> · 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code 	Nicht anwendbar.

(Fortsetzung auf Seite 9)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 24.05.2016

überarbeitet am: 24.05.2016

Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Fortsetzung von Seite 8)

· Transport/weitere Angaben:

· ADR

- **Begrenzte Menge (LQ)** 1 kg
- **Freigestellte Mengen (EQ)** Code: E2
- Höchste Nettomenge je Innenverpackung: 30 g*
- Höchste Nettomenge je Außenverpackung: 500 g*
- **Beförderungskategorie** 2
- **Tunnelbeschränkungscode** E

· IMDG

- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E2
- Maximum net quantity per inner packaging: 30 g*
- Maximum net quantity per outer packaging: 500 g*

- **UN "Model Regulation":** UN 3263 ÄTZENDER BASISCHER ORGANISCHER
FESTER STOFF, N.A.G. (4-NONYL-, PHENOL,
VERZWEIGT [2]), 8, II, UMWELTGEFÄHRDEND

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 3 (Selbsteinstufung):** stark 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

- H302 *Gesundheitsschädlich bei Verschlucken.*
- H312 *Gesundheitsschädlich bei Hautkontakt.*
- H314 *Verursacht schwere Verätzungen der Haut und schwere Augenschäden.*
- H317 *Kann allergische Hautreaktionen verursachen.*
- H318 *Verursacht schwere Augenschäden.*
- H335 *Kann die Atemwege reizen.*
- H361f *Kann vermutlich die Fruchtbarkeit beeinträchtigen.*
- H361fd *Kann vermutlich die Fruchtbarkeit beeinträchtigen. Kann vermutlich das Kind im Mutterleib schädigen.*
- H400 *Sehr giftig für Wasserorganismen.*
- H410 *Sehr giftig für Wasserorganismen mit langfristiger Wirkung.*
- H412 *Schädlich für Wasserorganismen, mit langfristiger Wirkung.*

(Fortsetzung auf Seite 10)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 24.05.2016

überarbeitet am: 24.05.2016

Handelsname: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Fortsetzung von Seite 9)

· 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

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

Repr. 2: Reproductive toxicity, Hazard Category 2

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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

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

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

DE

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

Stampato il: 24.05.2016

Revisione: 24.05.2016

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 B)
- **Articolo numero:** 12642-14 (B)
- **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
www.emsdiasum.com
- **Società Italiana Chimici**
Via Rio Nell Ellba 140
00138 Rome, Italy
Tel: 39 06 8800211
Fax: 39 30 06 8815313
Web: 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

Repr. 2 H361fd Sospettato di nuocere alla fertilità Sospettato di nuocere al feto.



GHS05 corrosione

Skin Corr. 1B H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

Eye Dam. 1 H318 Provoca gravi lesioni oculari.



GHS09 ambiente

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



GHS07

Acute Tox. 4 H302 Nocivo se ingerito.

Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

(continua a pagina 2)

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

Stampato il: 24.05.2016

Revisione: 24.05.2016

Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Segue da pagina 1)

- **2.2 Elementi dell'etichetta**
- **Etichettatura secondo il regolamento (CE) n. 1272/2008**
Il prodotto è classificato ed etichettato conformemente al regolamento CLP.
- **Pittogrammi di pericolo**



GHS05 GHS07 GHS08 GHS09

- **Avvertenza Pericolo**
- **Componenti pericolosi che ne determinano l'etichettatura:**
4-nonilfenolo, ramificato
2-piperazin-1-ilettilamina
3-azapentano-1,5-diamina
4,4'-isopropilidendifenolo
- **Indicazioni di pericolo**
H302 Nocivo se ingerito.
H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
H317 Può provocare una reazione allergica cutanea.
H361fd Sospettato di nuocere alla fertilità Sospettato di nuocere al feto.
H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.
- **Consigli di prudenza**
P303+P361+P353 IN CASO DI CONTATTO CON LA PELLE (o con i capelli): togliere immediatamente tutti gli indumenti contaminati. Sciacquare la pelle/fare una doccia.
P305+P351+P338 IN CASO DI CONTATTO CON GLI OCCHI: sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.
P310 Contattare immediatamente un CENTRO ANTIVELENI/un medico.
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 EINECS: 231-131-3	argento sostanza con un limite comunitario di esposizione sul posto di lavoro	50-100%
CAS: 84852-15-3 EINECS: 284-325-5	4-nonilfenolo, ramificato ⚠ Repr. 2, H361fd; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	10-25%

(continua a pagina 3)

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

Stampato il: 24.05.2016

Revisione: 24.05.2016

Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Segue da pagina 2)

CAS: 140-31-8 EINECS: 205-411-0	2-piperazin-1-iletilamina ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	2,5-10%
CAS: 80-05-7 EINECS: 201-245-8	4,4'-isopropilidendifenolo ⚠ Repr. 2, H361f; ⚠ Eye Dam. 1, H318; ⚠ Skin Sens. 1, H317; STOT SE 3, H335	≤ 2,5%
CAS: 111-40-0 EINECS: 203-865-4	3-azapentano-1,5-diamina ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	≤ 2,5%

· **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**

· **Indicazioni generali:**

Allontanare immediatamente gli abiti contaminati dal prodotto.

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

· **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 diversi minuti tenendo le palpebre ben aperte e consultare il medico.

· **Ingestione:**

Chiamare subito il medico.

Bere abbondante acqua e sostare in zona ben areata. Richiedere immediatamente l'intervento del medico.

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

· **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:**

CO₂, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.

· **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**

Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.

· **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:**

Utilizzare mezzi di neutralizzazione.

(continua a pagina 4)

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

Stampato il: 24.05.2016

Revisione: 24.05.2016

Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Segue da pagina 3)

Smaltimento del materiale contaminato conformemente al punto 13.

Provvedere ad una sufficiente areazione.

6.4 Riferimento ad altre sezioni

Per informazioni relative ad una 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

Accurata captazione delle polveri.

Aprire e manipolare i recipienti con cautela.

· **Indicazioni in caso di incendio ed esplosione:** Tener pronto il respiratore.

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:** Mantenere i recipienti ermeticamente chiusi.

· **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/m³
*sali solubili (come Ag) **metallo, polvere e fumi

VL Valore a lungo termine: 0,1 mg/m³

80-05-7 4,4'-isopropilidendifenolo

VL Valore a lungo termine: 10 mg/m³
polveri inalabili

111-40-0 3-azapentano-1,5-diamina

TWA Valore a lungo termine: 4,2 mg/m³, 1 ppm
Cute

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

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.

Custodire separatamente l'equipaggiamento protettivo.

Evitare il contatto con gli occhi.

Evitare il contatto con gli occhi e la pelle.

· **Maschera protettiva:** Non necessario.

(continua a pagina 5)

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

Stampato il: 24.05.2016

Revisione: 24.05.2016

Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Segue da pagina 4)

· **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:**



Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche

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

· **Indicazioni generali**

· **Aspetto:**

Forma: Solido
Colore: Color argento

· **Odore:** Amminico

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non applicabile.

· **Cambiamento di stato**

Temperatura di fusione/ambito di fusione: Non definito.

Temperatura di ebollizione/ambito di ebollizione: Non definito.

· **Punto di infiammabilità:** 93 °C

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

· **Temperatura di accensione:** 315 °C

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

· **Autoaccensione:** Prodotto non autoinfiammabile.

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

· **Limiti di infiammabilità:**

Inferiore: Non definito.

Superiore: Non definito.

· **Tensione di vapore:** Non applicabile.

· **Densità:** Non definito.

(continua a pagina 6)

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

Stampato il: 24.05.2016

Revisione: 24.05.2016

Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Segue da pagina 5)

· Densità relativa	Non definito.
· Densità del vapore	Non applicabile.
· Velocità di evaporazione	Non applicabile.
· Solubilità in/Miscibilità con acqua:	Insolubile.
· Coefficiente di distribuzione (n-Octanol/acqua):	Non definito.
· Viscosità:	
Dinamica:	Non applicabile.
Cinematica a 40 °C:	20.5 mm ² /s
· Tenore del solvente:	
Solventi organici:	0.0 %
VOC (CE)	0,00 %
Contenuto solido:	68.0 %
· 9.2 Altre informazioni	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**
Nocivo se ingerito.

- **Valori LD/LC50 rilevanti per la classificazione:**

140-31-8 2-piperazin-1-iletilamina

Orale	LD50	2140 mg/kg (rat)
Cutaneo	LD50	880 mg/kg (rabbit)

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea**
Provoca gravi ustioni cutanee e gravi lesioni oculari.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Provoca gravi lesioni oculari.
- **Sensibilizzazione respiratoria o cutanea**
Può provocare una reazione allergica cutanea.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione**
Sospettato di nuocere alla fertilità Sospettato di nuocere al feto.

(continua a pagina 7)

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

Stampato il: 24.05.2016

Revisione: 24.05.2016

Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Segue da pagina 6)

- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **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.
Tossico per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 3 (D) (Autoclassificazione): molto pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature, anche in piccole dosi.
Non immettere il prodotto non diluito o non neutralizzato nelle acque di scarico e nei canali di raccolta.
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di quantità minime di prodotto.
Tossico per pesci e plancton.
Molto tossico per gli organismi acquatici
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

- | | |
|---|--|
| · 14.1 Numero ONU | |
| · ADR, IMDG, IATA | UN3263 |
| · 14.2 Nome di spedizione dell'ONU | |
| · ADR | 3263 SOLIDO ORGANICO CORROSIVO, BASICO, N.A.S. (4-nonylphenolo, ramificato), PERICOLOSO PER L'AMBIENTE |
| · IMDG | CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT |
| · IATA | Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched) |

(continua a pagina 8)

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

Stampato il: 24.05.2016

Revisione: 24.05.2016

Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Segue da pagina 7)

· 14.3 Classi di pericolo connesso al trasporto

· ADR, IMDG



· **Classe** 8 Materie corrosive
· **Etichetta** 8

· IATA



· **Class** 8 Materie corrosive
· **Label** 8

· 14.4 Gruppo di imballaggio

· **ADR, IMDG, IATA** II

· 14.5 Pericoli per l'ambiente:

· **Marine pollutant:** Il prodotto contiene materie pericolose per l'ambiente: 4-nonilfenolo, ramificato
· **Marcatura speciali (ADR):** Simbolo (pesce e albero)

· 14.6 Precauzioni speciali per gli utilizzatori

· **Numero Kemler:** Attenzione: Materie corrosive
80
· **Numero EMS:** F-A,S-B
· **Segregation groups** Alkalis
· **Stowage Category** B
· **Segregation Code** SG35 Stow "separated from" acids.

· 14.7 Trasporto di rifiuti secondo l'allegato II di MARPOL ed il codice IBC

Non applicabile.

· Trasporto/ulteriori indicazioni:

· **ADR**
· **Quantità limitate (LQ)** 1 kg
· **Quantità esenti (EQ)** Codice: E2
Quantità massima netta per imballaggio interno: 30 g
Quantità massima netta per imballaggio esterno: 500 g
· **Categoria di trasporto** 2
· **Codice di restrizione in galleria** E

· IMDG

· **Limited quantities (LQ)** 1L
· **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 500 g

(continua a pagina 9)

IT

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

Stampato il: 24.05.2016

Revisione: 24.05.2016

Denominazione commerciale: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Segue da pagina 8)

· **UN "Model Regulation":** UN 3263 SOLIDO ORGANICO CORROSIVO, BASICO, N.A.S. (4-NONILFENOLO, RAMIFICATO), 8, II, PERICOLOSO PER L'AMBIENTE

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.
- **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.

· **Fraasi rilevanti**

- H302 Nocivo se ingerito.
- H312 Nocivo per contatto con la pelle.
- H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
- H317 Può provocare una reazione allergica cutanea.
- H318 Provoca gravi lesioni oculari.
- H335 Può irritare le vie respiratorie.
- H361f Sospettato di nuocere alla fertilità
- H361fd Sospettato di nuocere alla fertilità Sospettato di nuocere al feto.
- H400 Molto tossico per gli organismi acquatici.
- H410 Molto tossico per gli organismi acquatici con effetti di lunga durata.
- H412 Nocivo 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Repr. 2: Reproductive toxicity, Hazard Category 2
- Repr. 2: Reproductive toxicity, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
- Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

안전지침서

제조조의와 2006/에 따라라따

기압점: 2016.05.24

개정: 2016.05.24

1 화학제품과 회사에 관한 정보

제품제품제자

· **제품명:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

· **상품번호:** 12642-14 (B)

해당해당물질이나 혼합물과관련관용도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.

· **제품의 권고 용도와 사용 제한** 함 실험 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** : 독성 가능 conduct safety department

· **비상연락 전화번호:**

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

2 유해성.위험성

· **순물질 또는 혼합물**의 분류분류



건강에 위험

생식 독성 구분2 H361 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨



부식

피부 부식성/자극성 구분1 H314 피부에 심한 화상과 눈에 손상을 일으킴

심한 눈 손상/자극성 구분1 H318 눈에 심한 손상을 일으킴



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/E에 따라라따

기압점: 2016.05.24

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제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(1 쪽부터계속)

· 그림문자



GHS05 GHS07 GHS08 GHS09

· 신호어 위험

· 상표상에명확히위험성이표시된성분:

- 4-nonylphenol, branched
- 2-piperazin-1-ylethylamine
- 2,2'-iminodiethylamine
- bisphenol A

유해 ~~유해~~ ~~유해~~ ~~유해~~ ~~문구~~

- 피부에 심한 화상과 눈에 손상을 일으킴
- 알레르기성 피부 반응을 일으킬 수 있음
- 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
- 장기적인 영향에 의해 수생생물에게 매우 유독함

· 예방조치 ~~문구~~ ~~문구~~ ~~문구~~

- 피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 행구시오.
- 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.
- 즉시 독성물질센터/병원 연락 필요.
- (라벨 참조) 처치를 하시오.
- 잠금장치가 있는 저장장소에 저장 하시오.
- 현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

기타기타 ~~유해성~~

- PBT(잔류성, 생물농축성, 물질분해성) 및 vPvB(고 잔류성, 고 생물농축성) 물질인 경우 결과
- PBT(잔류성, 생물농축성, 물질분해성) 당사항 없음.
- vPvB(고 잔류성, 고 생물농축성) 물질인 경우 당사항 없음.

3 구성성분의 명칭 및 함유량

· 화학적 특성: 혼합물

설명설명설명한 첨가물 이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험요소요소

CAS No.	Chemical Name	Concentration
7440-22-4	silver	50-100%
84852-15-3	4-nonylphenol, branched ⚠ 생식 독성 구분2, H361; ⚠ 피부 부식성/자극성 구분1, H314; ⚠ 수생환경유해성-급성 구분1, H400; 수생환경유해성-만성 구분1, H410; ⚠ 급성 독성(경구) 구분4, H302	10-25%
140-31-8	2-piperazin-1-ylethylamine ⚠ 피부 부식성/자극성 구분1, H314; ⚠ 급성 독성(경구) 구분4, H302; 급성 독성(경피) 구분4, H312; 피부과민성 구분1, H317; 수생환경유해성-만성 구분3, H412	2,5-10%
80-05-7	bisphenol A ⚠ 생식 독성 구분2, H361; ⚠ 심한 눈 손상/자극성 구분1, H318; ⚠ 피부과민성 구분1, H317; 표적장기-1회노출 구분3, H335	≤ 2,5%

(3 쪽에계속)

안전지침서

제7/2006/E에 따라

기압점: 2016.05.24

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제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

111-40-0	2,2'-iminodiethylamine	(2 쪽부터계속)
	<div style="display: flex; justify-content: space-between;"> ⚠ 피부 부식성/자극성 구분1, H314; ⚠ 급성 독성(경구) 구분4, H302; 급성 독성(경피) 구분4, H312; 피부과민성 구분1, H317 ≤ 2,5% </div>	

4 응급조치 요령

· 응급조치요령 내용내용
· 일 반적 정보정보
 이 제품에 의해 오염 된 의상은 즉시 제거 한다.
 중 독 증 상 은 몇 시 간 이 지 난 뒤 에 발 생 할 수 있 다. 따 라 서 사 고 가 발 생 한 후 에 적 어 도 48 시 간 동 안 은 의 료 진 의 관 찰 을 받 아 야 한 다.

· 흡입했을 때:
 신 신선 한 공 기 를 쫓 고 나 서 반 드 시 의 료 진 의 도 움 을 구 한 다.
 환 자 가 의 식 을 잃 었 을 경 우 에 는 안 전 한 자 세 에 서 환 자 를 운 반 한 다.

· 피 부 에 접 촉 했 을 때: 즉 시 물 과 비 누 로 씻 고 잘 행 군 다.

· 눈 에 눈 에 들 어 갔 을 때: 흐 르 는 물 에 눈 을 몇 분 동 안 씻 어 내 고 나 서, 의 사 와 상 담 한 다

· 먹 었 을 때:
 즉 시 의 사 의 도 움 을 구 한 다.
 물 을 충 분 히 마 시 고 신 신선 한 공 기 를 쫓 다. 즉 시 의 사 의 도 움 을 구 한 다.

기 타 기 타 각 각 의 주 의 사 항:
 가 장 가 장 중 요 한 단 문 명 생 존 생 활 을 영 향 영 향 적 인 정 보 가 존 재 하 지 않 습 니 다.
 · 즉 각 적 인 의 료 처 처 및 특 별 치 료 가 필 요 함 을 시 사 후 정 후 정 후 적 인 정 보 가 존 재 하 지 않 습 니 다.

5 폭발.화재시 대처방법

· 소화제
· 적 절 한 소 화 제:
 이 산 화 탄 소, 진 화 용 석 회 가 루 또는 물 방 사 를 사 용 하 고, 더 큰 화 재 는 물 을 분 사 하 거 나 알 코 올 이 합 유 된 거 품 으 로 끈 다.

· 본 화 학 물 질 이 나 혼 합 물 에 서 발 생 하 는 특 별 위험 특성 추가 적 인 정 보 가 존 재 하 지 않 습 니 다.

· 소 방 관 에 대 한 대 한 고 사 항

화 재 화 재 치 리 관 관 직 직 화 화 보호 구 및 예 방 조 치: 특 별 한 조 치 가 필 요 없 음.

6 누출 사고 시 대처방법

· 개인 적 예 방 조 치, 보 호 장 비 및 응 급 처 처 안전 장 비 착용 하 고, 무 방 비 의 사 람 은 격 리 시 킨 다.

· 환 경 관 관 조 치:
 하 천 이 나 하 수 도 로 유 입 되 었 을 경 우 해 당 관 청 에 보 고 한 다.
 하 수 도 망 / 해 수 면 위 의 물 / 지 하 수 로 도 달 하 지 않 게 한 다.

· 밀 폐 및 폐 물 처 리 관 관 조 치: 중 성 제 를 사 용 한 다.
 항 목 13 에 따 라 오 염 된 물 질 을 쓰 레 기 로 처 분 한 다.
 충 분 한 환 기 가 되 도 록 한 다.

· 사 진 썬 썬 조 조 참 조
 안 전 관 리 에 대 한 정 보 는 제 7 장 을 참 고 하 시 오.
 개 인 보 호 장 비 에 대 한 정 보 는 제 8 장 을 참 고 하 시 오.
 쓰 레 기 처 리 에 대 한 정 보 는 제 13 장 을 참 고 하 시 오.

안전지침서

제 제조 의 의 7/2006/E 에 따라 라 따

기압점: 2016.05.24

개정: 2016.05.24

제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(3 쪽부터 계속)

7 취급 및 저장방법

취급 취급 취급

안전 안전 안전을 위한 예방 조치

철저한 먼지 제거.

조심스럽게 용기를 개봉하거나 취급한다.

화재 화재 위험을 예방하기 위해 예방 대책에 관한 정보는 보호장비를 항상 비치한다.

· 혼합 위험성: 인양 안전 조건

보관 보관 보관

· 안전 저장 방법: 특별한 요구 사항이 없음.

· 하중 및 공기 중 수분에 대한 안전 정보: 필요 없음

· 보관 조건에 관한 추가 정보: 용기를 새지 않게 밀폐한 채 보관한다.

· 구체적 최종 사용자: 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

· 첨단 시설 디자인에 대한 추가 정보: 더 이상 의 자료는 없음. 항목 7 을 참고하시오.

통제 통제 통제 변수

· 화학 물질의 노출 기준, 생물학적 노출 기준 등:

7440-22-4 silver

TLV (KR) 장기간의 값: 0.01* 0.1** mg/m³

*sol. compds. as Ag, **metal

IOELV (EU) 장기간의 값: 0.1 mg/m³

PEL (US) 장기간의 값: 0.01 mg/m³

REL (US) 장기간의 값: 0.01 mg/m³

TLV (US) 장기간의 값: 0.1 mg/m³

metal: dust and fume

80-05-7 bisphenol A

IOELV (EU) 장기간의 값: 10 mg/m³

respirable dust

111-40-0 2,2'-iminodiethylamine

TLV (KR) 장기간의 값: 4 mg/m³, 1 ppm

Skin

REL (US) 장기간의 값: 4 mg/m³, 1 ppm

Skin

TLV (US) 장기간의 값: 4.2 mg/m³, 1 ppm

Skin

· 추가 정보: 정보 조할 당시에 유효한 목록을 기초로 사용했다.

노출 통제 통제 통제

개인 개인 보호구

· 일반적 보호 조치 및 위생 조치:

· 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.

· 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.

· 휴식 전이나 작업이 끝날 때마다 손을 씻는다.

· 방호복은 따로 보관한다.

· 눈과의 접촉을 피한다.

· 눈과 피부와의 접촉을 피한다.

· 호흡기 보호는 필요 없음.

(5 쪽에 계속)

안전지침서

제조조의와 2006/EL에 따라라따

기압점: 2016.05.24

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제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(4 쪽부터계속)

보충 보호보호



보호용 장갑

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

장갑 의재료

적합한장갑의선정은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전에예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

장갑 재료 의 투과 시간 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

보충 보호보호



확조이는보안경

9 물리화학적 특성

기본 물리화학적 특성에 대한 정보

· 일반정보	
외형외형외형	고체
· 물리적 상태	고체
· 색:	은색
· 냄새	아민종류의
· 후각역치	알맞지않다.
· pH:	해당사항 없음.
· 상태변화	
· 녹는점/어는점:	맞지않는
· 초기초기점과 끝점범위범위	맞지않는
· 인화점:	93 °C
· 인화성 고체/기체	알맞지않다.
· 점화온도:	315 °C
· 분해온도	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없다
· 인화 인화 인화폭발 위험성 상한선	하한
· 아래로:	알맞지않다.
· 위로위로	알맞지않다.
· 증기압:	해당사항 없음.
· 밀도밀도	맞지않는다.
· 비중비중	알맞지않다.
· 증기밀도:	해당사항 없음.

(6 쪽에계속)

안전지침서

제조조의와 7/2006/E에 따라라따

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(5 쪽부터계속)

중발중발중발속도	해당사항 없음.
· 용해도: 물:	불용해성의
· n 옥탄올/물 분배계수:	알맞지않다.
점도점도점도	
역학적: 동점성 의경우 40 °C:	해당사항 없음. 20.5 mm ² /s
· 용매내용물 유기용매: VOC (EU)	0.0 % 0.00 %
고체양함량함량	68.0 %
기타정보정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성유해 반응의 가능성 / 피해야할조건조건에따라사용할경우해체는없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.
- 피해야할조건조건적인 정보가 존재하지 않습니다.
- 혼합 혼합 혼합 혼합 혼합 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

· 독성학적 영향에 대한정보
급성독성독성독성

· LD/LC50-수 체에 따른분류분류
140-31-8 2-piperazin-1-ylethylamine
구강의 LD50 2140 mg/kg (rat)
피부의 LD50 880 mg/kg (rabbit)

· 입체적 자극효과
피부 피부 피부 또는 자극성: 피부와점막에강한부식작용.
심한 심한 심한 심한 심한 자극성:

강한부식작용
심각한안구상처의위험이있는강한자극
· 감각화: 피부접촉을통하여감각화가가능성이있다.

· 추가적인 독성에 관한정보

이제 품은 유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전 준비에대하여제시하고있다.

건강에해로운

부식작용의

자극적인

삼킬경우 식도나 위등의내장기관벽에상처를주는위험과 마찬가지로입주변이나구강에강한부식작용을한다

(7 쪽에계속)

안전지침서

제조조의와 2006/EC에 따라라다

기압점: 2016.05.24

개정: 2016.05.24

제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(6 쪽부터계속)

다음다음중중의 잠재적인 효과에 대한정보
· C
· 생식 독성 구분2

12 환경에 미치는 영향

독성독성독성

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

· 생태독성:

의견의견의견

- 어류에 매우 독성임
- 어류에독이됨

· 추가적인 생태정보정보

일반 일반 일반 특징

- 수질오염등급 3 (자체등급분류): 심하게수질오염이된 지하수나, 하천으로또는 하수도망에도달하지않게한다. 역시극소수의양이라도안된다. 희석시키지않은채또는중화시키지않은채하수도나배수로에도달하지않게해야한다. 지하수로아주미세한양이유입되었을경우엔이미식수오염상태이다 하천에서는역시물고기나플랑크톤게는독성이있다.

- 물속의유기체에아주독이되는것
- 물속의유기체에독이되는것

- PBT(잔류성, 생물농축성, 독성물질) 및 vPvB(고 잔류성, 고 생물농축성 물질)에 해당하지 않음.
- PBT(잔류성, 생물농축성, 독성물질) 당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질) 당사항 없음.

기타기타 부속용 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

· 폐기물 처리 방법

권고 권고 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.

· 비위생적 포장포장

권고 권고 지침에입각한쓰레기처리.

14 운송에 필요한 정보

유엔 유엔 번호

- ADR, IMDG, IATA UN3263

· 적정적정 위험명

- ADR 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), ENVIRONMENTALLY HAZARDOUS
- IMDG CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT
- IATA Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched)

(8 쪽에계속)

안전지침서

제조조의 위험성 7/2006/E에 따라

기압점: 2016.05.24

개정: 2016.05.24

제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(7 쪽부터 계속)

교통 규정/위험성 라벨링

· ADR, IMDG



등급 등급 등급

· 위험성 라벨라벨

8 부식작용하는 물질
8

· IATA



· Class
· Label

8 부식작용하는 물질
8

· 용기등급

· ADR, IMDG, IATA

II

· 환경적 유해물질:

이 물질은 환경오염물질을 함유하고 있다: 4-nonylphenol, branched

· 해양오염물질:

심벌 (물고기와 나무)

특수 위험성 라벨링 (ADR):

심벌 (물고기와 나무)

· 이동시 특별 취급 조치

경고: 부식작용하는 물질

위험성 라벨링 코드

80

· E 번호 번호

F-A,S-B

· Segregation groups

Alkalis

· Stowage Category

B

· Segregation Code

SG35 Stow "separated from" acids.

· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크물질 운송 운송

해당사항 없음.

· 운송/취급/처리 정보

· ADR

한정량 (제한량 수량)

· Excepted quantities (EQ)

1 kg

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

운송 운송 운송 구분

2

터널 제한량 라벨링 코드

E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

(9 쪽에 계속)

안전지침서

제조조의와 2006/6/27/2006/6/27에 따라라따

기압점: 2016.05.24

개정: 2016.05.24

제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(8 쪽부터계속)

· **UN번호** 3263

UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-NONYLPHENOL, BRANCHED), 8, II, ENVIRONMENTALLY HAZARDOUS

15 법적 규제현황

해당 해당 **수용물질 또는 혼합물**에 대한 **대한민국, 일본, 미국, 유럽 연합, 캐나다, 호주, 뉴질랜드, 기타 국가별 규제** 법률

· Korean Existing Chemical Inventory		
7440-22-4	silver	KE-31261
84852-15-3	4-nonylphenol, branched	KE-03584
140-31-8	2-piperazin-1-ylethylamine	KE-28762
80-05-7	bisphenol A	KE-23982
111-40-0	2,2'-iminodiethylamine	KE-01357
68411-71-2	Reaction product with diglycidyl ether of Bisphenol A	2004-3-2843

· **라벨** 라벨 요소

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

· **그림문자**



GHS05 GHS07 GHS08 GHS09

· **신호어** 위험

· **상표상에명확히위험성이표시된성분:**

- 4-nonylphenol, branched
- 2-piperazin-1-ylethylamine
- 2,2'-iminodiethylamine
- bisphenol A

유해 유해 **위험** 위험 **문구** 문구

- 피부에 심한 화상과 눈에 손상을 일으킴
- 알레르기성 피부 반응을 일으킬 수 있음
- 태아 또는 생식능력에 손상을 일으킬 것으로 의심됨
- 장기적인 영향에 의해 수생생물에게 매우 유독함

· **예방 조처** 문구문구

- 피부(모발)에 접촉 시: 모든 오염된 옷을 즉시 벗으시오 피부를 물/샤워로 행구시오.
- 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.
- 즉시 독성물질센터/병원 연락 필요.

(라벨 참조) 처치를 하시오.

잠금장치가 있는 저장장소에 저장하시오.

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** **작성** 일자: 2016.05.24

(10 쪽에계속)

안전지침서

제조조의약품/2006/E라에 따라라따

기압점: 2016.05.24

개정: 2016.05.24

제품명: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(9 쪽부터계속)

개정 개정 개정 개정 개정 개정 일자: 1 / 2016.05.24

· 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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

급성 독성(경구) 구분4: Acute toxicity, Hazard Category 4

피부 부식성/자극성 구분1: Skin corrosion/irritation, Hazard Category 1

심한 눈 손상/자극성 구분1: Serious eye damage/eye irritation, Hazard Category 1

피부과민성 구분1: Sensitisation - Skin, Hazard Category 1

생식 독성 구분2: Reproductive toxicity, Hazard Category 2

표적장기-1회노출 구분3: Specific target organ toxicity - Single exposure, Hazard Category 3

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 구분3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

KR

Risalah Data Keselamatan Bahan

Menurut 91/155 EC

Tarikh cetak 24.05.2016

Disemak semula pada 24.05.2016

1 Pengenalpastian bahan/sediaan dan syarikat

- **Pengenal pasti produk**
- **Nama dagang:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)
- **Nombor artikel:** 12642-14 (B)
- **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
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

Pemb. 2 H361 Disyaki merosakkan kesuburan atau janin.



Kakisan

Kks. Kulit 1B H314 Menyebabkan lecuran kulit dan kerosakan mata yang teruk.

Kros. Mata 1 H318 Menyebabkan kerosakan mata yang serius.



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).

(Bersambung ke halaman 2)

Risalah Data Keselamatan Bahan

Menurut 91/155 EC

Tarikh cetak 24.05.2016

Disemak semula pada 24.05.2016

Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Sambungan halaman 1)

· **Piktogram hazard**



· **Perkataan isyarat Bahaya**

· **Komponen pelabelan yang menentukan bahaya:**

4-nonylphenol, branched
2-piperazin-1-ylethylamine
2,2'-iminodiethylamine
bisphenol A

· **Pernyataan hazard**

Menyebabkan lecuran kulit dan kerosakan mata yang teruk.
Boleh menyebabkan tindak balas alahan kulit.
Disyaki merosakkan kesuburan atau janin.
Sangat toksik kepada hidupan akuatik dengan kesan kekal berpanjangan.

· **Pernyataan langkah perlindungan**

JIKA TERKENA KULIT (atau rambut): Tanggalkan semua pakaian yang tercemar dengan segera. Basuh kulit dengan air/pancuran.

JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.

Segera hubungi PUSAT RACUN/doktor.

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%
84852-15-3	4-nonylphenol, branched ☠ Pemb. 2, H361; ☠ Kks. Kulit 1B, H314; ☠ Akuatik Akut 1, H400; Akuatik Kronik 1, H410; ☠ Toks. Akut 4, H302	10-25%
140-31-8	2-piperazin-1-ylethylamine ☠ Kks. Kulit 1B, H314; ☠ Toks. Akut 4, H302; Toks. Akut 4, H312; Pem. Kulit 1, H317; Akuatik Kronik 3, H412	2,5-10%
80-05-7	bisphenol A ☠ Pemb. 2, H361; ☠ Kros. Mata 1, H318; ☠ Pem. Kulit 1, H317; STOT SE 3, H335	≤ 2,5%
111-40-0	2,2'-iminodiethylamine ☠ Kks. Kulit 1B, H314; ☠ Toks. Akut 4, H302; Toks. Akut 4, H312; Pem. Kulit 1, H317	≤ 2,5%

MY

(Bersambung ke halaman 3)

Risalah Data Keselamatan Bahan

Menurut 91/155 EC

Tarikh cetak 24.05.2016

Disemak semula pada 24.05.2016

Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Sambungan halaman 2)

4 Langkah pertolongan cemas

- **Keterangan langkah pertolongan cemas**
- **Maklumat am:**
 Segera tanggalkan mana-mana pakaian yang terkena produk.
 Gejala keracunan boleh berlaku selepas beberapa jam, maka rawatan perubatan hendaklah diberikan sekurang-kurangnya 48 jam selepas kemalangan.
- **Jika tersedut:**
 Berikan udara bersih dan pastikan rawatan doktor diperolehi.
 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. Kemudian hubungi doktor.
- **Jika tertelan:**
 Segera hubungi doctor.
 Minum air yang banyak dan berikan udara bersih. Segera hubungi doktor.
- **Maklumat untuk doktor:**
- **Gejala dan kesan paling penting, akut dan lewat** Tiada maklumat lanjut yang diperolehi.
- **Arahan bagi apa-apa rawatan perubatan dan rawatan khas yang diperlukan**
 Tiada maklumat lanjut yang diperolehi.

5 Langkah memadam kebakaran

- **Bahan pemadam api**
- **Agen pemadam yang sesuai:**
 CO₂, serbuk atau semburan air. Padam kebakaran besar dengan semburan air atau busa rintangan alkohol.
- **Bahaya khusus yang timbul daripada bahan atau campuran** Tiada maklumat lanjut yang diperolehi.
- **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**
 Pakai kelengkapan perlindungan. Jauhkan mereka yang tidak dilindungi dari kawasan tercemar.
- **Langkah perlindungan alam sekitar:**
 Hubungi pihak berkuasa berkaitan jika berlaku peresapan masuk ke dalam saluran air atau sistem pembetulan.
 Jangan biarkannya memasuki pembentung/air permukaan atau tanah.
- **Kaedah dan bahan untuk pembendungan dan pembersihan:**
 Gunakan agen peneutralan.
 Lupuskan bahan tercemar sebagai sisa mengikut perkara 13.
 Pastikan pengalihan mencukupi.
- **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**
 Nyahdebu secara menyeluruh.

(Bersambung ke halaman 4)

Risalah Data Keselamatan Bahan Menurut 91/155 EC

Tarikh cetak 24.05.2016

Disemak semula pada 24.05.2016

Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Sambungan halaman 3)

- Buka dan kendalikan bekas dengan cermat.
- **Maklumat kebakaran dan perlindungan daripada letupan:** Pastikan alat perlindungan pernafasan sentiasa ada.
- **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:** Pastikan bekas sentiasa bertutup rapat.
- **Kegunaan akhir yang khusus** Tiada maklumat lanjut yang diperolehi.

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 ³ *Logum **Sebatian terlarutkan, sebagai Ag
111-40-0 2,2'-iminodiethylamine	
PEL	Nilai jangka panjang: 4,2 mg/m ³ , 1 ppm (kulit)

- **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.
- Simpan pakaian perlindungan secara berasingan.
- Elakkan daripada terkena mata.
- Elakkan daripada terkena mata dan kulit.
- **Perlindungan pernafasan:** Tidak diperlukan
- **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.

- **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.

(Bersambung ke halaman 5)

Risalah Data Keselamatan Bahan Menurut 91/155 EC

Tarikh cetak 24.05.2016

Disemak semula pada 24.05.2016

Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Sambungan halaman 4)

· **Perlindungan mata:**



Gogal bertutup rapat

9 Ciri fizik dan kimia

· **Maklumat tentang ciri fizik dan kimia**

· **Maklumat Am**

· **Rupa:**

Bentuk: pepejal

Warna: Berwarna perak

· **Bau:**

Seperti amina

· **Had ambang bau:**

Tidak ditentukan.

· **Nilai pH:**

Tidak berkenaan

· **Perubahan pada keadaan**

Takat lebur/Julat lebur: Tidak ditentukan.

Takat didih/Julat didih: Tidak ditentukan

· **Takat kilat:**

93 °C

· **Kemudahbakaran (pepejal, gas)**

Tidak ditentukan.

· **Suhu pencucuhan:**

315 °C

· **Suhu penguraian:**

Tidak ditentukan.

· **Pencucuhan sendiri**

Produk tidak tercucuh sendiri

· **Bahaya letupan:**

Produk tidak ada bahaya letupan.

· **Had letupan :**

Bawah: Tidak ditentukan.

Atas: Tidak ditentukan.

· **Tekanan wap:**

Tidak berkenaan

· **Ketumpatan:**

Tidak ditentukan.

· **Ketumpatan relatif**

Tidak ditentukan.

· **Ketumpatan wap**

Tidak berkenaan

· **Kadar penyejatan**

Tidak berkenaan

· **Keterlarutan dalam / Keterlarutcampuran dengan**

Air: Tidak larut.

· **Pekali pengasingan (n-oktanol/air)**

Tidak ditentukan.

· **Kelikatan:**

Dinamik: Tidak berkenaan

Kinematik pada 40 °C: 20.5 mm²/s

· **Kandungan pelarut:**

Pelarut organik: 0.0 %

Kandungan pepejal: 68.0 %

(Bersambung ke halaman 6)

Risalah Data Keselamatan Bahan

Menurut 91/155 EC

Tarikh cetak 24.05.2016

Disemak semula pada 24.05.2016

Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Sambungan halaman 5)

· **Maklumat lain**

Tiada maklumat lanjut yang diperoleh.

10 Kestabilan dan kereaktifan

- **Kereaktifan** Tiada maklumat lanjut yang diperoleh.
- **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 diperoleh.
- **Bahan tidak serasi:** Tiada maklumat lanjut yang diperoleh.
- **Produk penguraian yang berbahaya:** Tiada produk penguraian berbahaya yang diketahui.

11 Maklumat toksikologi

- **Maklumat tentang kesan toksikologi**
- **Ketoksikan akut:**

· **Nilai LD/LC50 yang berkaitan untuk pengelasan:**

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

Oral	LD50	2140 mg/kg (rat)
Derma	LD50	880 mg/kg (rabbit)

- **Kesan kerengsaan primer:**
- **pada kulit:** Kesan kaustik yang kuat pada kulit dan mukus membran.
- **pada mata**
Kesan kaustik yang kuat.
Perengsa yang kuat dengan bahaya kecederaan mata yang teruk.
- **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:
Memudaratkan
Mengakis
Perengsa
Tertelan akan menyebabkan kesan kaustik yang kuat pada mulut dan tekak serta bahaya perliangan esofagus dan perut.
- **Maklumat bagi kumpulan berikut tentang kesan yang mungkin timbul.**
- **Kesan CMR (karsinogen, mutagen dan gangguan kesuburan)**
Pemb. 2

12 Maklumat ekologi

- **Ketoksikan**
- **Ketoksikan akuatik:** Tiada maklumat lanjut yang diperoleh.
- **Keterusan dan keterdegradasikan** Tiada maklumat lanjut yang diperoleh.
- **Kelakuan dalam sistem alam sekitar:**
- **Potensi bioakumulatif** Tiada maklumat lanjut yang diperoleh.
- **Mobiliti di dalam tanah** Tiada maklumat lanjut yang diperoleh.
- **Kesan ekotoksik:**
- **Catatan:**
Sangat toksik kepada ikan

(Bersambung ke halaman 7)

Risalah Data Keselamatan Bahan Menurut 91/155 EC

Tarikh cetak 24.05.2016

Disemak semula pada 24.05.2016

Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Sambungan halaman 6)

Toksik kepada ikan.

· **Maklumat tambahan ekologi:**

· **Nota am:**

Bahaya air kelas 3 (Peraturan Jerman) (Penilaian sendiri): amat berbahaya kepada air

Jangan biarkan produk memasuki air tanah, saluran air atau sistem pembetulan, walaupun sedikit.

Tidak boleh memasuki air pembentungan atau parit saliran tanpa dicairkan atau dineutralkan.

Bahaya kepada air minuman walaupun dalam amat sedikit produk kebocoran yang memasuki tanah

Juga beracun kepada ikan dan plankton dalam jasad air

Sangat toksik kepada organisma akuatik

Toksik kepada organisma akuatik

· **Keputusan penilaian PBT dan vPvB**

· **PBT:** Tidak berkenaan

· **vPvB:** Tidak berkenaan

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

13 Maklumat pelupusan

· **Kaedah rawatan sisa**

· **Syor:**

Tidak boleh dilupuskan bersama dengan sampah isi rumah. Jangan biarkan produk memasuki sistem pembentungan.

· **Pembungkusan yang tidak bersih:**

· **Syor:** Pelupusan mestilah dijalankan menurut peraturan rasmi

14 Maklumat pengangkutan

· **Nombor UN**

· **ADR, IMDG, IATA**

UN3263

· **Nama penghantaran UN yang betul**

· **ADR**

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

· **IMDG**

CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT

· **IATA**

Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched)

· **pengangkutan kelas bahaya**

· **ADR, IMDG**



· **Kelas**

8 Bahan mengakis.

· **Label**

8

(Bersambung ke halaman 8)

Risalah Data Keselamatan Bahan

Menurut 91/155 EC

Tarikh cetak 24.05.2016

Disemak semula pada 24.05.2016

Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Sambungan halaman 7)

· IATA



· **Class** 8 Bahan mengakis.
 · **Label** 8

· **Kumpulan pembungkusan**
 · **ADR, IMDG, IATA** II

· **Hazard persekitaran:** Produk mengandungi bahan yang berbahaya kepada alam sekitar: 4-nonylphenol, branched
 · **Bahan cemar marin:** Tanda (ikan dan pokok)
 · **Pelabelan khas (ADR):** Tanda (ikan dan pokok)

· **Langkah perlindungan khas untuk pengguna** Amaran: Bahan mengakis.
 · **Kod bahaya (Kemler):** 80
 · **Nombor EMS:** F-A,S-B
 · **Segregation groups** Alkalis
 · **Stowage Category** B
 · **Segregation Code** SG35 Stow "separated from" acids.

· **Pengangkutan dalam pukal menurut Lampiran II MARPOL73/78 dan Kod IBC** Tidak berkenaan

· Pengangkutan/Maklumat Tambahan:

· **ADR**
 · **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 g
 Maximum net quantity per outer packaging: 500 g

· **IMDG**
 · **Limited quantities (LQ)** IL
 · **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 g
 Maximum net quantity per outer packaging: 500 g

· **"Peraturan Model" UN:** UN 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-NONYLPHENOL, BRANCHED), 8, II, ENVIRONMENTALLY HAZARDOUS

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**



GHS05 GHS07 GHS08 GHS09

(Bersambung ke halaman 9)

Risalah Data Keselamatan Bahan

Menurut 91/155 EC

Tarikh cetak 24.05.2016

Disemak semula pada 24.05.2016

Nama dagang: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(Sambungan halaman 8)

· **Perkataan isyarat Bahaya**

· **Komponen pelabelan yang menentukan bahaya:**

4-nonylphenol, branched
2-piperazin-1-ylethylamine
2,2'-iminodiethylamine
bisphenol A

· **Pernyataan hazard**

Menyebabkan lecuran kulit dan kerosakan mata yang teruk.
Boleh menyebabkan tindak balas alahan kulit.
Disyaki merosakkan kesuburan atau janin.
Sangat toksik kepada hidupan akuatik dengan kesan kekal berpanjangan.

· **Pernyataan langkah perlindungan**

JIKA TERKENA KULIT (atau rambut): Tanggalkan semua pakaian yang tercemar dengan segera. Basuh kulit dengan air/pancuran.

JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.

Segera hubungi PUSAT RACUN/doktor.

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.

· **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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Toks. Akut 4: Acute toxicity, Hazard Category 4

Kks. Kulit 1B: Skin corrosion/irritation, Hazard Category 1B

Kros. Mata 1: Serious eye damage/eye irritation, Hazard Category 1

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

Pemb. 2: Reproductive toxicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Akuatik Akut 1: Hazardous to the aquatic environment - Acute Hazard, Category 1

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

Akuatik Kronik 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

Sikkerhetsdatablad

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

Trykkdato: 24.05.2016

revidert den: 24.05.2016

Avsnitt 1: Identifikasjon av kjemikaliyet og ansvarlig firma

- **1.1 Produktidentifikator**
- **Handelsnavn:** TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)
- **Artikkelnummer:** 12642-14 (B)
- **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
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

Repr. 2 H361fd Mistenkes for å kunne skade forplantningsevnen. Mistenkes for å kunne gi fosterskader.



GHS05 Etsende virkning

Skin Corr. 1B H314 Gir alvorlige etseskader på hud og øyne.
Eye Dam. 1 H318 Gir alvorlig øyeskade.



GHS09 Miljø

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



GHS07

Acute Tox. 4 H302 Farlig ved svelging.
Skin Sens. 1 H317 Kan utløse en allergisk hudreaksjon.

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

(fortsatt på side 2)

Sikkerhetsdatablad

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

Trykkdato: 24.05.2016

revidert den: 24.05.2016

Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(fortsatt fra side 1)

Farepiktogrammer


GHS05 GHS07 GHS08 GHS09

Varselord Fare
Farebestemmende komponenter ved etikettering:

4-nonylfenol, forgrenet
 2-piperazin-1-yletylamin
 3-azapentan-1,5-diamin
 4,4'-isopropylidendifenol

Faresetninger

H302 Farlig ved svelging.
 H314 Gir alvorlige etseskader på hud og øyne.
 H317 Kan utløse en allergisk hudreaksjon.
 H361fd Mistenkes for å kunne skade forplantningsevnen. Mistenkes for å kunne gi fosterskader.
 H410 Meget giftig, med langtidsvirkning, for liv i vann.

Sikkerhetssetninger

P303+P361+P353 VED HUDKONTAKT (eller håret): Tilsølte klær må fjernes straks. Skyll/dusj huden med vann.
 P305+P351+P338 VED KONTAKT MED ØYNENE: Skyll forsiktig med vann i flere minutter. Fjern eventuelle kontaktlinser dersom dette enkelt lar seg gjøre. Fortsett skyllingen.
 P310 Kontakt umiddelbart et GIFTINFORMASJONSSENTER/en lege.
 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 EINECS: 231-131-3	silver stoff med fellesskapsgrenseverdi for eksponering på arbeidsplassen	50-100%
CAS: 84852-15-3 EINECS: 284-325-5	4-nonylfenol, forgrenet ⚠ Repr. 2, H361fd; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	10-25%
CAS: 140-31-8 EINECS: 205-411-0	2-piperazin-1-yletylamin ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	2,5-10%
CAS: 80-05-7 EINECS: 201-245-8	4,4'-isopropylidendifenol ⚠ Repr. 2, H361f; ⚠ Eye Dam. 1, H318; ⚠ Skin Sens. 1, H317; STOT SE 3, H335	≤ 2,5%

(fortsatt på side 3)

NO

Sikkerhetsdatablad

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

Trykkdato: 24.05.2016

revidert den: 24.05.2016

Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(fortsatt fra side 2)

CAS: 111-40-0	3-azapentan-1,5-diamin	≤ 2,5%
EINECS: 203-865-4	⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	

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

Avsnitt 4: Førstehjelpstiltak

- **4.1 Beskrivelse av førstehjelpstiltak**
- **Generelle informasjoner:**
Klær som er tilsølt med produktet må fjernes omgående.
Forgiftningssymptomer kan også oppstå etter mange timer. Personer må derfor ha legetilsyn i minst 48 timer etter en ulykke.
- **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 skylld godt etterpå.
- **Etter øyekontakt:** Skyll øynene med åpne øyenlokk i flere minutter under rennende vann og tilkall lege.
- **Etter svelging:**
Søk lege straks.
Drikk rikelig med vann og sørg for frisk luft. Tilkall lege omgående.
- **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 Sløkkemiddel**
- **Egnede slukningsmidler:**
CO₂, slukningspulver eller vann i spredt stråle. Større branner bekjempes med vann i spredt stråle eller med skum som er motstandsdyktig mot alkohol.
- **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.

Avsnitt 6: Tiltak ved utilsiktet utslipp

- **6.1 Personlige verneiltak, verneutstyr og prosedyrer ved nødsituasjoner**
Ta på beskyttelsesdrakt. Hold ubeskyttede personer borte.
- **6.2 Miljøverntiltak:**
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:**
Bruk nøytraliseringsmiddel.
Bortskaff kontaminert matereriale som avfall i.h.t. punkt 13.
Sørg for tilstrekkelig ventilasjon.
- **6.4 Henviisning til andre avsnitt**
Informasjoner om sikker håndtering, se kapittel 7.
Informasjoner om personlig beskyttelsesutstyr, se kapittel 8.
Informasjoner om bortskaffelse/deponering, se kapittel 13.

NO

(fortsatt på side 4)

Sikkerhetsdatablad

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

Trykkdato: 24.05.2016

revidert den: 24.05.2016

Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(fortsatt fra side 3)

Avsnitt 7: Håndtering og oppbevaring

· 7.1 Forholdsregler for sikker håndtering

God avstøvning.

Beholderne må åpnes og håndteres forsiktig.

· **Henvisninger om brann- og eksplosjonsvern:** Hold åndedrettsbeskyttelse i beredskap.

· 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:** Hold beholderne tett tillukket.

· **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 ³ metalstøv og røyk, E
80-05-7 4,4'-isopropylidendifenol	
AG	Langtidsverdi: 10 mg/m ³ A R E
111-40-0 3-azapentan-1,5-diamin	
AG	Langtidsverdi: 4 mg/m ³ , 1 ppm H A

· **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 fôrstoffer.

Fjern omgående forurensede, gjennomvåtede klær.

Vask hendene før arbeidspauser og ved arbeidets slutt.

Beskyttelsesklær må oppbevares adskilt.

Unngå berøring med øynene.

Unngå berøring med øyne og hud.

· **Åndedrettsvern:** Ikke nødvendig.

· **Håndvern:**



Beskyttelseshansker

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

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.

(fortsatt på side 5)

Sikkerhetsdatablad

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

Trykkdato: 24.05.2016

revidert den: 24.05.2016

Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(fortsatt fra side 4)

· **hanskemateriale**

Valget av egnet hanske er ikke bare avhengig av materiale, men også av andre kvalitetskjenne­tegn 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:**



Tettsittende vernebrille

Avsnitt 9: Fysiske og kjemiske egenskaper

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

· **alminnelige opplysninger**

· **Utseende:**

· Form:	Fast
· Farge:	Sølvfarget
· Lukt:	Aminlignende
· Luktterskel:	Ikke bestemt.

· **pH-verdi:** Ikke brukbar.

· **Tilstands­endring**

· Smeltepunkt/smelteområde:	Ikke bestemt.
· Kokepunkt/kokeområde:	Ikke bestemt.

· **Flammepunkt:** 93 °C

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

· **Antennelsestemperatur:** 315 °C

· **Spaltnings­temperatur:** Ikke bestemt.

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

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

· **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.

(fortsatt på side 6)

Sikkerhetsdatablad

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

Trykkdato: 24.05.2016

revidert den: 24.05.2016

Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(fortsatt fra side 5)

Kinematisk ved 40 °C:	20.5 mm ² /s
· Løsningsmiddelandel:	
Organiske løsningsmidler:	0.0 %
VOC (EF)	0,00 %
Andel faste stoffer:	68.0 %
· 9.2 Annen informasjon	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**

Farlig ved svelging.

- **Klassifiseringsrelevante LD/LC50-verdier:**

140-31-8 2-piperazin-1-yletylamin

Oral	LD50	2140 mg/kg (rat)
Dermal	LD50	880 mg/kg (rabbit)

- **Primær irritasjonsvirkning:**
- **Hudetsing/hudirritasjon**
Gir alvorlige etseskader på hud og øyne.
- **Alvorlig øyeskade/øyeirritasjon**
Gir alvorlig øyeskade.
- **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** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Kreftfremkallende egenskap** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Reproduksjonstoksisitet**
Mistenkes for å kunne skade forplantningsevnen. Mistenkes for å kunne gi fosterskader.
- **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.

(fortsatt på side 7)

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

Trykkdato: 24.05.2016

revidert den: 24.05.2016

Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(fortsatt fra side 6)

- **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
giftig for fisk
- **Ytterligere økologiske informasjoner:**
- **Generelle informasjoner:**
Vannfareklasse 3 (D) (Selvklassifisering): meget farlig for vann
Ikke la stoffet komme ned i grunnvannet, i vassdrag eller i kloakker, heller ikke i små mengder.
Må ikke komme uforynnet eller unøytralisert ned i spillvann eller i avløpsgrøft.
Fare for drikkevann allerede ved utstrømning av meget små mengder i marken.
I vassdrag også giftig for fisker og plankton.
meget giftig for vannorganismer
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

- | | |
|---|--|
| <ul style="list-style-type: none"> · 14.1 UN-nummer: · ADR, IMDG, IATA | UN3263 |
| <ul style="list-style-type: none"> · 14.2 Korrekt UN-forsendelsesbetegnelse · ADR · IMDG · IATA | 3263 ETSENDE FAST STOFF, BASISK, ORGANISK, N.O.S. (4-nonylphenol, forgrenet), MILJØSKADELG STOFF

CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT

Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched) |
| <ul style="list-style-type: none"> · 14.3 transport fareklasser · ADR, IMDG |  |
| <ul style="list-style-type: none"> · klasse | 8 Etsende stoffer |

(fortsatt på side 8)

NO


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

Trykkdato: 24.05.2016

revidert den: 24.05.2016

Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(fortsatt fra side 7)

· Fareseddel	8
· IATA	
	
· Class	8 Etsende stoffer
· Label	8
· 14.4 Emballasjegruppe: · ADR, IMDG, IATA	II
· 14.5 Miljøfarer:	Produktet inneholder miljøskadelige stoffer: 4-nonylfenol, forgrenet
· Marine pollutant:	Symbol (fisk og treet)
· Spesielle merking (ADR):	Symbol (fisk og treet)
· 14.6 Særskilte forholdsregler for bruker	Advarsel: Etsende stoffer
· Kemler-tall:	80
· EMS-nummer:	F-A,S-B
· Segregation groups	Alkalis
· Stowage Category	B
· Segregation Code	SG35 Stow "separated from" acids.
· 14.7 Transport i bulk iht. anneks II til MARPOL 73/78 og til IBC-koden	Ikke brukbar.
· Transport/ytterligere informasjoner:	
· ADR	
· Begrenset mengde (LQ)	1 kg
· Unntatte mengder (EQ)	Kode: E2 Maksimal nettovekt per inneremballasje: 30 g Maksimal nettovekt per ytteremballasje: 500 g
· Transportkategori	2
· Tunnel restriksjonskode	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g
· UN "Model Regulation":	UN 3263 ETSENDE FAST STOFF, BASISK, ORGANISK, N.O.S. (4-NONYLFENOL, FORGRENET), 8, II, MILJØSKADELG STOFF

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.

NO

(fortsatt på side 9)

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

Trykkdato: 24.05.2016

revidert den: 24.05.2016

Handelsnavn: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(fortsatt fra side 8)

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 produktegenskaper og er ikke grunnlag for noe kontraktsmessig rettsforhold.

· **Relevante satser**

- H302 Farlig ved svelging.
- H312 Farlig ved hudkontakt.
- H314 Gir alvorlige etseskader på hud og øyne.
- H317 Kan utløse en allergisk hudreaksjon.
- H318 Gir alvorlig øyeskade.
- H335 Kan forårsake irritasjon av luftveiene.
- H361f Mistenkes for å kunne skade forplantningsevnen.
- H361fd Mistenkes for å kunne skade forplantningsevnen. Mistenkes for å kunne gi fosterskader.
- H400 Meget giftig for liv i vann.
- H410 Meget giftig, med langtidsvirkning, for liv i vann.
- H412 Skadelig, 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
- Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Repr. 2: Reproductive toxicity, Hazard Category 2
- Repr. 2: Reproductive toxicity, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - Acute Hazard, Category 1
- Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
- Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

NO

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

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 B)

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

· 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

Repr. 2

H361fd Se sospecha que perjudica a la fertilidad. Se sospecha que daña al feto.



GHS05 corrosión

Skin Corr. 1B

H314

Provoca quemaduras graves en la piel y lesiones oculares graves.

Eye Dam. 1

H318

Provoca lesiones oculares graves.



GHS09 medio ambiente

Aquatic Chronic 1

H410

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



GHS07

Acute Tox. 4

H302

Nocivo en caso de ingestión.

(se continua en página 2)

Ficha de datos de seguridad según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

Nombre comercial: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(se continua en página 1)

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.

· **Pictogramas de peligro**



GHS05 GHS07 GHS08 GHS09

· **Palabra de advertencia Peligro**

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

- 4-nonifenol, ramificado
- 2-piperazin-1-iletilamina
- 1,5-diamino-3-azopentano
- bisfenol A

· **Indicaciones de peligro**

- H302 *Nocivo en caso de ingestión.*
- H314 *Provoca quemaduras graves en la piel y lesiones oculares graves.*
- H317 *Puede provocar una reacción alérgica en la piel.*
- H361fd *Se sospecha que perjudica a la fertilidad. Se sospecha que daña al feto.*
- H410 *Muy tóxico para los organismos acuáticos, con efectos nocivos duraderos.*

· **Consejos de prudencia**

- P303+P361+P353 *EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente todas las prendas contaminadas. Aclararse la piel con agua/ducharse.*
- P305+P351+P338 *EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.*
- P310 *Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.*
- 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 EINECS: 231-131-3	plata sustancia a la que se aplica un límite comunitario de exposición en el lugar de trabajo	50-100%
CAS: 84852-15-3 EINECS: 284-325-5	4-nonifenol, ramificado ⚠ Repr. 2, H361fd; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Acute Tox. 4, H302	10-25%

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

Nombre comercial: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(se continua en página 2)

CAS: 140-31-8 EINECS: 205-411-0	2-piperazin-1-iletilamina ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412	2,5-10%
CAS: 80-05-7 EINECS: 201-245-8	bisfenol A ⚠ Repr. 2, H361f; ⚠ Eye Dam. 1, H318; ⚠ Skin Sens. 1, H317; STOT SE 3, H335	≤ 2,5%
CAS: 111-40-0 EINECS: 203-865-4	1,5-diamino-3-azopentano ⚠ Skin Corr. 1B, H314; ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	≤ 2,5%

· **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**

· **Instrucciones generales:**

Quitarse de inmediato toda prenda contaminada con el producto.

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

· **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:**

Limpia los ojos abiertos durante varios minutos con agua corriente y consultar un médico.

· **En caso de ingestión:**

Consultar inmediatamente un médico.

Beber mucha agua a respirar aire fresco. Solicitar asistencia médica inmediatamente.

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

· **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:**

CO₂, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.

· **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**

Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.

· **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:**

Utilizar un neutralizador.

(se continua en página 4)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

Nombre comercial: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(se continua en página 3)

Desechar el material contaminado como vertido según ítem 13.

Asegurar suficiente ventilación.

· **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**

Desempolvar cuidadosamente.

Abrir y manejar el recipiente con cuidado.

· **Prevención de incendios y explosiones:** Tener preparados los aparatos respiratorios.

· **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:**

Mantener el recipiente cerrado herméticamente.

· **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 ³
VLI	

80-05-7 bisfenol A

LEP	Valor de larga duración: 10 mg/m ³
Sen, VLI, ae	

111-40-0 1,5-diamino-3-azopentano

LEP	Valor de larga duración: 4,3 mg/m ³ , 1 ppm
vía dérmica, Sen	

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

· **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.

Guardar la ropa protectora por separado.

Evitar el contacto con los ojos.

Evitar el contacto con los ojos y la piel.

· **Protección respiratoria:** No es necesario.

(se continua en página 5)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

Nombre comercial: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(se continua en página 4)

· 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:


Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas
· Datos generales
· Aspecto:

Forma:	Sólido
Color:	Plateado
Olor:	Similar al de las aminas
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: 93 °C

· Inflamabilidad (sólido, gaseiforme): No determinado.

· Temperatura de ignición: 315 °C

· Temperatura de descomposición: No determinado.

· Autoinflamabilidad: El producto no es autoinflamable.

· Peligro de explosión: El producto no es explosivo.

· Límites de explosión:

Inferior:	No determinado.
Superior:	No determinado.

· Presión de vapor: No aplicable.

(se continua en página 6)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

Nombre comercial: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(se continua en página 5)

· Densidad:	Indeterminado.
· Densidad relativa	No determinado.
· Densidad de vapor	No aplicable.
· Velocidad de evaporación	No aplicable.
· Solubilidad en / miscibilidad con agua:	Insoluble.
· Coeficiente de reparto (n-octanol/agua):	No determinado.
· Viscosidad:	
Dinámica:	No aplicable.
Cinemática a 40 °C:	20.5 mm ² /s
· Concentración del disolvente:	
Disolventes orgánicos:	0.0 %
VOC (CE)	0,00 %
· Contenido de cuerpos sólidos:	68.0 %
· 9.2 Otros datos	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**
Nocivo en caso de ingestión.

· **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

140-31-8 2-piperazin-1-iletilamina

Oral	LD50	2140 mg/kg (rat)
Dermal	LD50	880 mg/kg (rabbit)

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas**
Provoca quemaduras graves en la piel y lesiones oculares graves.
- **Lesiones o irritación ocular graves**
Provoca lesiones oculares graves.
- **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**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

(se continua en página 7)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

Nombre comercial: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(se continua en página 6)

- **Toxicidad para la reproducción**
Se sospecha que perjudica a la fertilidad. Se sospecha que daña al feto.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **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.
Tóxico para peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 3 (autoclaseficación): muy peligroso para el agua
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados, ni siquiera en pequeñas cantidades.
En estado no diluido o no neutralizado, no verter en el alcantarillado o en otros sistemas de desagüe.
Una cantidad ínfima vertida en el subsuelo ya representa un peligro para el agua potable.
Vertido en aguas superficiales, también es tóxico para los peces y el plancton.
muy tóxico para organismos acuáticos
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** UN3263

(se continua en página 8)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

Nombre comercial: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(se continua en página 7)

· **14.2 Designación oficial de transporte de las Naciones Unidas**
 · **ADR** 3263 SÓLIDO CORROSIVO, BÁSICO, ORGÁNICO, N.E.P. (4-nonifenol, ramificado), PELIGROSO PARA EL MEDIO AMBIENTE
 · **IMDG** CORROSIVE SOLID, BASIC, ORGANIC, N.O.S. (4-nonylphenol, branched), MARINE POLLUTANT
 · **IATA** Corrosive solid, basic, organic, n.o.s. (4-nonylphenol, branched)

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

· **ADR, IMDG**



· **Clase** 8 Materias corrosivas
 · **Etiqueta** 8

· **IATA**



· **Class** 8 Materias corrosivas
 · **Label** 8

· **14.4 Grupo de embalaje**

· **ADR, IMDG, IATA** II

· **14.5 Peligros para el medio ambiente:** El producto contiene materias peligrosas para el medio ambiente: 4-nonifenol, ramificado

· **Contaminante marino:** Símbolo (pez y árbol)

· **Marcado especial (ADR):** Símbolo (pez y árbol)

· **14.6 Precauciones particulares para los usuarios** Atención: Materias corrosivas

· **Número Kemler:** 80

· **Número EMS:** F-A,S-B

· **Segregation groups** Alkalis

· **Stowage Category** B

· **Segregation Code** SG35 Stow "separated from" acids.

· **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)** 1 kg

· **Cantidades exceptuadas (EQ)** Código: E2

Cantidad neta máxima por envase interior: 30 g

Cantidad neta máxima por embalaje exterior: 500 g

· **Categoría de transporte** 2

· **Código de restricción del túnel** E

(se continua en página 9)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

Nombre comercial: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

(se continua en página 8)

· **IMDG**

· **Limited quantities (LQ)**

· **Excepted quantities (EQ)**

1L

Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

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

UN 3263 SÓLIDO CORROSIVO, BÁSICO, ORGÁNICO,
N.E.P. (4-NONIFENOL, RAMIFICADO), 8, II,
PELIGROSO PARA EL MEDIO AMBIENTE

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
- **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.

· **Frases relevantes**

H302 Nocivo en caso de ingestión.

H312 Nocivo en contacto con la piel.

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

H317 Puede provocar una reacción alérgica en la piel.

H318 Provoca lesiones oculares graves.

H335 Puede irritar las vías respiratorias.

H361f Se sospecha que perjudica a la fertilidad.

H361fd Se sospecha que perjudica a la fertilidad. Se sospecha que daña al feto.

H400 Muy tóxico para los organismos acuáticos.

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

H412 Nocivo 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

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

(se continua en página 10)

Ficha de datos de seguridad
según 1907/2006/CE, Artículo 31

fecha de impresión 24.05.2016

Revisión: 24.05.2016

Nombre comercial: TWO PART CONDUCTIVE SILVER EPOXY ADHESIVE (PART B)

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

Repr. 2: Reproductive toxicity, Hazard Category 2

Repr. 2: Reproductive toxicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1

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

Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

(se continua en página 9)

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