

Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code: 411 00 19410-6045B
Product name: ELECTROCONDUCTIVE SILVER GLUE

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

Intended use: Electroconductive epoxy adhesive

1.3. Details of the supplier of the safety data sheet

Name: Meccanocar Italia S.r.l.
Full address: Via San Francesco, 22
District and Country: 56033 Capannoli (PI)
Italy
Tel. +39 0587 609433
Fax +39 0587 607145

e-mail address of the competent person

responsible for the Safety Data Sheet: moreno.meini@meccanocar.it

1.4. Emergency telephone number

For urgent inquiries refer to: National Poisons Information Service: +44 121 507 4123

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Reproductive toxicity, category 2	H361	Suspected of damaging fertility or the unborn child.
Acute toxicity, category 4	H312	Harmful in contact with skin.
Specific target organ toxicity - repeated exposure, category 1	H372	Causes damage to organs through prolonged or repeated exposure.
Skin corrosion, category 1	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1	H410	Very toxic to aquatic life with long lasting effects.

2.2. Label elements

ELECTROCONDUCTIVE SILVER GLUE

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



Signal words:

Danger

Hazard statements:

H361	Suspected of damaging fertility or the unborn child.
H312	Harmful in contact with skin.
H372	Causes damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P310	Immediately call a POISON CENTER / doctor.
P273	Avoid release to the environment.
P302+P352	IF ON SKIN: wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice / attention.
P501	Dispose of contents / container in accordance with local regulations.

Contains: 2-PIPERAZIN-1-YLETHYLAMINE
3,6-DIAZAOTTANO-1,8-DIAMINE

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
2-PIPERAZIN-1-YLETHYLAMINE		
CAS 140-31-8	19,5 ≤ x < 21	Repr. 2 H361, Acute Tox. 3 H311, Acute Tox. 4 H302, STOT RE 1 H372, Skin Corr. 1 H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412
EC 205-411-0		
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ELECTROCONDUCTIVE SILVER GLUE

Reg. no. 01-2119471486-30-XXXX

3,6-DIAZAOTTANO-1,8-DIAMINE

CAS 112-24-3

5 ≤ x < 6

Acute Tox. 4 H312, Skin Corr. 1 H314, Eye Dam. 1 H318, Skin Sens. 1 H317,
Aquatic Chronic 3 H412

EC 203-950-6

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The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures**4.1. Description of first aid measures**

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

4.2. Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

4.3. Indication of any immediate medical attention and special treatment needed

Information not available

SECTION 5. Firefighting measures**5.1. Extinguishing media**

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

ELECTROCONDUCTIVE SILVER GLUE**SECTION 6. Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage**7.1. Precautions for safe handling**

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection**8.1. Control parameters****2-PIPERAZIN-1-YLETHYLAMINE**

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,058	mg/l
Normal value in marine water	0,006	mg/l
Normal value for fresh water sediment	215	mg/kg
Normal value for marine water sediment	21,5	mg/kg
Normal value of STP microorganisms	250	mg/l
Normal value for the terrestrial compartment	100	mg/kg

Health - Derived no-effect level - DNEL / DMEL

ELECTROCONDUCTIVE SILVER GLUE

Route of exposure	Effects on consumers			Effects on workers				
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation		80 mg/m3		0,015 mg/m3		10,6 mg/m3		10,6 mg/m3
Skin								3,33 mg/kg bw/d

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

Exposure levels must be kept as low as possible to avoid significant build-up in the organism. Manage personal protective equipment so as to guarantee maximum protection (e.g. reduction in replacement times).

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SILVER

Respiratory protection: A properly installed and compliant particulate filter respirator is required if a risk assessment indicates that this is necessary (e.g.

ELECTROCONDUCTIVE SILVER GLUE

for work / heat treatment with insufficient ventilation). Recommended filter for short-term use: P2 filter

Eye protection: safety glasses such as glasses conforming to an approved standard must be used when a risk assessment indicates that this is necessary to avoid exposure to splashes of liquids, mists or dusts (for example: when using silver liquid or during the appearance of dust).

Hand and body protection: wear flame retardant, thermal and chemical resistant protective clothing (such as waterproof gloves or gloves conforming to an approved standard) if a risk assessment indicates that this is necessary (e.g. when using the silver in liquid form).

2-PIPERAZIN-1-YLETHYLAMINE

Eye / face protection: Safety glasses conforming to an approved standard must be used when a risk assessment indicates that this is necessary to avoid exposure to splashes of liquids, mists, gases or dust. If contact is possible, wear the following protection unless the assessment indicates a higher degree of protection: chemical splash goggles and / or face shield. If inhalation hazards exist, a full face respirator may be required.

Hand protection: Chemical resistant waterproof gloves conforming to an approved standard should always be worn when handling chemicals if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, verify during use that the gloves still retain their protective properties. It should be noted that the time required for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection: Personal protective equipment for the body must be selected according to the activity carried out and the related risks and must be approved by a specialist before handling this product.

Respiratory protection: based on the hazard and exposure potential, select a respirator that meets the appropriate standards or certification. Respirators should be used in accordance with a respiratory protection program to ensure fit, training and other important aspects of use.

Recommended: combined filtering device (DIN EN 14387), filter type: A-P2.

SECTION 9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	liquid
Colour	silver grey
Odour	characteristic
Odour threshold	Not available
pH	Not available
Melting point / freezing point	Not available
Initial boiling point	> 121 °C
Boiling range	121 °C
Flash point	> 93 °C
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	4,1 g/cm ³
Solubility	insoluble in water
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Explosive properties	Not available
Oxidising properties	Not available

ELECTROCONDUCTIVE SILVER GLUE**9.2. Other information**

Information not available

SECTION 10. Stability and reactivity**10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

10.4. Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

2-PIPERAZIN-1-YLETHYLAMINE

Aerosol or mist formation. Keep away from heat, sparks and flame. Not smoking.

10.5. Incompatible materials**SILVER**

Acetylene - Dangerous reactions can form with acetylene in an explosive acetylide silver.

2-PIPERAZIN-1-YLETHYLAMINE

Reactive or incompatible with the following materials: oxidizing materials, metals, acids. Chlorinated hydrocarbon.

10.6. Hazardous decomposition products**2-PIPERAZIN-1-YLETHYLAMINE**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11. Toxicological information**11.1. Information on toxicological effects**

ELECTROCONDUCTIVE SILVER GLUEMetabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

LC50 (Inhalation) of the mixture:
Not classified (no significant component)
LD50 (Oral) of the mixture:
>2000 mg/kg
LD50 (Dermal) of the mixture:
1404,26 mg/kg

SILVER

Method: OECD 423
Reliability: 2
Species: Rat (Sprague-Dawley; female)
Route of exposure: Oral
Results: LD50> 2000 mg / kg
Method: OECD 436
Reliability: 1
Species: Rat (Crj: CD (SD); male / female)
Route of exposure: Inhalation
Results: LC50> 5.16 mg / L air
Method: OECD 402
Reliability: 2
Species: Rat (Sprague-Dawley; male / female)
Route of exposure: Dermal
Results: LD50> 2000 mg / kg

2-PIPERAZIN-1-YLETHYLAMINE

Method: Not indicated
Reliability: 2
Species: Rat (Carworth-Wistar; male)
Route of exposure: Oral
Results: LD50 = approx. 2097 mg / kg bw
Method: Not indicated
Reliability: 2
Species: Rat (Carworth-Wistar; female)
Route of exposure: Inhalation (vapors)
Results: Not classified
Method: Not indicated
Reliability: 2
Species: Rabbit (New Zealand White; male)
Route of exposure: Dermal

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Results: LD50 = 866 mg / kg bw

SKIN CORROSION / IRRITATION

Corrosive for the skin

SILVER

Method: OECD 404
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Dermal
Results: Not irritating

2-PIPERAZIN-1-YLETHYLAMINE

Method: Not indicated
Reliability: 2
Species: Rabbit
Route of exposure: Dermal
Results: Severe belly damage

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

SILVER

Method: OECD 405
Reliability: 2
Species: Rabbit (New Zealand White)
Route of exposure: Ocular
Results: Non-irritating

2-PIPERAZIN-1-YLETHYLAMINE

Method: Not indicated
Reliability: 2
Species: Rabbit
Route of exposure: Ocular
Results: Strongly irritating

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

Skin sensitization
2-PIPERAZIN-1-YLETHYLAMINE

Method: Equivalent or similar to OECD 406
Reliability: 2
Species: guinea pig (male / female)
Route of exposure: Dermal
Results: Category 1B (indication of skin sensitizing potential)

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

ELECTROCONDUCTIVE SILVER GLUE**SILVER**

Method: OECD 487-In vitro test

Reliability: 1

Species: Lymphocytes

Results: Negative with and without metabolic activation

2-PIPERAZIN-1-YLETHYLAMINE

Method: Equivalent or similar to OECD 471 in vitro test

Reliability: 1

Species: S. typhimurium

Results: Negative with and without metabolic activation

Method: Not indicated - In vivo test

Reliability: 1

Species: Mouse (Swiss Webster; male / female)

Route of exposure: Intraperitoneal

Results: Negative

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Suspected of damaging fertility or the unborn child

Adverse effects on sexual function and fertility

2-PIPERAZIN-1-YLETHYLAMINE

Method: OECD 422

Reliability: 1

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Oral

Results: NOAEC (fertility) = 8000 mg / L

Adverse effects on development of the offspring

SILVER

Method: Equivalent or similar to OECD 414

Reliability: 1

Species: Rat (Sprague-Dawley)

Route of exposure: Oral

Results: Not classified

2-PIPERAZIN-1-YLETHYLAMINE

Method: OECD 414

Reliability: 1

Species: Rabbit (New Zealand White)

Route of exposure: Oral

Results: NOAEL (development) = 75 mg / kg bw / day

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

SILVER

ELECTROCONDUCTIVE SILVER GLUE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

2-PIPERAZIN-1-YLETHYLAMINE

Based on available data and through expert judgment, the substance is not classified in the target exposure prgani toxicity class for single exposure.

3,6-DIAZAOTTANO-1,8-DIAMINE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for single exposure.

STOT - REPEATED EXPOSURE

Causes damage to organs

SILVER

Method: OECD 408

Reliability: 2

Species: Rat (Fischer 344; male / female)

Route of exposure: Oral

Results: NOAEL = 30 mg / kg bw / day

Method: OECD 413

Reliability: 2

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Inhalation (aerosol)

Results: Not classified

2-PIPERAZIN-1-YLETHYLAMINE

Method: OECD 422

Reliability: 1

Species: Rat (Sprague-Dawley; male / female)

Route of exposure: Oral

Results: NOAEL = 2000 mg / L

Method: OECD 413

Reliability: 1

Species: Rat (F344 / DuCrI; male / female)

Route of exposure: Inhalation

Results: Not classified

Method: OECD 410

Reliability: 1

Species: Rat (Fischer 344; male / female)

Route of exposure: Dermal

Results: Not classified

3,6-DIAZAOTTANO-1,8-DIAMINE

Based on available data and through expert judgment, the substance is not classified in the target organ toxicity class for prolonged or repeated exposure.

Target organ

2-PIPERAZIN-1-YLETHYLAMINE

Respiratory tract

Route of exposure

2-PIPERAZIN-1-YLETHYLAMINE

ELECTROCONDUCTIVE SILVER GLUE

Inhalation

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

This product is dangerous for the environment and highly toxic for aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

2-PIPERAZIN-1-YLETHYLAMINE

LC50 - for Fish	2190 mg/l/96h
EC50 - for Crustacea	58 mg/l/48h
EC50 - for Algae / Aquatic Plants	1000 mg/l/72h

12.2. Persistence and degradability

Information not available

12.3. Bioaccumulative potential

Information not available

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations**13.1. Waste treatment methods**

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SILVER

The product can be reused after treatment. Return material to the metal recovery refinery.

ELECTROCONDUCTIVE SILVER GLUE**2-PIPERAZIN-1-YLETHYLAMINE**

The generation of waste should be avoided or minimized wherever possible. The disposal of this product, solutions and any by-products must always comply with the environmental protection requirements and the legislation on waste disposal and with the requirements of the local regional authorities. Dispose of excess and non-recyclable products through an authorized waste disposal contractor. Waste must not be disposed of without sewage treatment, unless it fully complies with the requirements of all competent authorities. The assignment of waste identification numbers / waste descriptions must be carried out according to the EWC, specific for the sector and the process.

SECTION 14. Transport information**14.1. UN number**

ADR / RID, IMDG, 2735
IATA:

14.2. UN proper shipping name

ADR / RID: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
IMDG: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
IATA: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.

14.3. Transport hazard class(es)

ADR / RID: Class: 8 Label: 8

IMDG: Class: 8 Label: 8

IATA: Class: 8 Label: 8

**14.4. Packing group**

ADR / RID, IMDG, II
IATA:

14.5. Environmental hazards

ADR / RID: NO
IMDG: NO
IATA: NO

14.6. Special precautions for user

ADR / RID: HIN - Kemler: 80

Limited
Quantities: 1
L

Tunnel
restriction
code: (E)

IMDG: Special Provision: -
EMS: F-A, S-B

Limited
Quantities: 1
L

IATA: Cargo:

Maximum

Packaging

ELECTROCONDUCTIVE SILVER GLUE

quantity: 30 L

instructions:

Pass.:

Maximum
quantity: 1 L855
Packaging
instructions:
851

Special Instructions:

A3, A803

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

Information not relevant

SECTION 15. Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EC: E1

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006Product

Point 3

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

ELECTROCONDUCTIVE SILVER GLUE

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Repr. 2	Reproductive toxicity, category 2
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
Skin Corr. 1	Skin corrosion, category 1
Eye Dam. 1	Serious eye damage, category 1
Skin Sens. 1	Skin sensitization, category 1
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H361	Suspected of damaging fertility or the unborn child.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H372	Causes damage to organs through prolonged or repeated exposure.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
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.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation

ELECTROCONDUCTIVE SILVER GLUE

- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
 16. Regulation (EU) 2019/521 (XII Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Product's classification is based on the calculation methods set out in Annex I of the CLP Regulation, unless otherwise indicated in sections 11 and 12.

The data for evaluation of chemical-physical properties are reported in section 9.