

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

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

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

- **1.1 Product identifier** 600282 PART A
- **Trade name:** 2-component liquid metal
- **Article number:** 4317784465007/1, 4317784465014/1
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Application of the substance / the mixture** Adhesives
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
E/D/E - Einkaufsbuero Deutscher Eisenhaendler GmbH
EDE Platz 1
D-42389 Wuppertal
Germany

Tel. +49 202 6096-0
e-mail: sdb@ede.de
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:** Giftinformationszentrum Mainz – Tel.: +49 (6131) 19240

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Muta. 2 H341 Suspected of causing genetic defects.
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS07 GHS08 GHS09

- **Signal word** Warning

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 1)

Hazard-determining components of labelling:

reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)
 2,3-epoxypropyl o-tolyl ether
 bis[4-(2,3-epoxypropoxy)phenyl]propane

Hazard statements

H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H341 Suspected of causing genetic defects.
 H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P201 Obtain special instructions before use.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

EUH205 Contains epoxy constituents. May produce an allergic reaction.

2.3 Other hazards People who are allergic to epoxides should avoid handling the product.

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: 25068-38-6 NLP: 500-033-5 Index number: 603-074-00-8 | reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700) ⚠ Aquatic Chronic 2, H411 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 | 60-65% |
| CAS: 7429-90-5 EINECS: 231-072-3 Index number: 013-002-00-1 Reg.nr.: 01-2119529243-45 | aluminium powder (stabilised) ⚠ Flam. Sol. 1, H228 | 15-25% |
| CAS: 1675-54-3 EINECS: 216-823-5 Index number: 603-073-00-2 | bis[4-(2,3-epoxypropoxy)phenyl]propane ⚠ Aquatic Chronic 2, H411 ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317 | 5-10% |

(Contd. on page 3)

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

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 2)

| | | |
|---|--|-------|
| CAS: 7727-43-7 EINECS: 231-784-4 | barium sulphate, natural ⚠ Acute Tox. 4, H302 | 5-10% |
| CAS: 2210-79-9 EINECS: 218-645-3 Index number: 603-056-00-X | 2,3-epoxypropyl o-tolyl ether ⚠ Muta. 2, H341 ⚠ Aquatic Chronic 2, H411 ⚠ Skin Irrit. 2, H315; Skin Sens. 1, H317 | 1-<5% |

- **Additional information:** For the wording of the listed hazard 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.

After inhalation:

Supply fresh air.
Seek medical treatment in case of complaints.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.

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

After swallowing:

Rinse out mouth and then drink plenty of water.
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.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

5.2 Special hazards arising from the substance or mixture No further relevant information available.**5.3 Advice for firefighters**

- **Protective equipment:** Wear self-contained respiratory protective device.

(Contd. on page 4)

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

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 3)

· Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures**· 6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

· 6.2 Environmental precautions:Do not allow product to reach sewage system or any water course.
Do not allow to enter sewers/ surface or ground water.**· 6.3 Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**· 7.1 Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.**· Information about fire - and explosion protection:**

Keep ignition sources away - Do not smoke.

· 7.2 Conditions for safe storage, including any incompatibilities**· Storage:****· Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.**· Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from oxidising agents.

Do not store together with acids.

· Further information about storage conditions: Store in cool, dry conditions in well sealed receptacles.**· Storage class: -****· 7.3 Specific end use(s)** No further relevant information available.

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

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 4)

*** SECTION 8: Exposure controls/personal protection****· 8.1 Control parameters****· Additional information about design of technical facilities:** No further data; see item 7.**· Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· DNELs**CAS: 1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane**Inhalative | Long term value for employees | 4.93 mg/m³ (industrial use)**CAS: 2210-79-9 2,3-epoxypropyl o-tolyl ether**Inhalative | Long term value for employees | 42.24 mg/m³ (industrial use)**· 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.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.**· Protection of hands:**

Protective gloves

· Material of gloves

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.4 mm**· 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

· Body protection: Protective work clothing

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

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 5)

*** SECTION 9: Physical and chemical properties****· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:****Form:** Pasty
Colour: Silver grey**· Odour:** Mild**· Odour threshold:** Not determined.**· pH-value:** Not determined.**· Change in condition****Melting point/freezing point:** Undetermined.**Initial boiling point and boiling range:** Undetermined.**· Flash point:** Not applicable.**· Flammability (solid, gas):** Not applicable.**· Decomposition temperature:** >200 °C**· Auto-ignition temperature:** Product is not selfigniting.**· Explosive properties:** Product does not present an explosion hazard.**· Explosion limits:****Lower:** Not determined.**Upper:** Not determined.**· Oxidising properties** Not determined.**· Vapour pressure:** Not determined.**· Density at 20 °C:** 1.4 g/cm³**· Relative density** Not determined.**· Vapour density** Not determined.**· Evaporation rate** Not determined.**· Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· Partition coefficient: n-octanol/water: Not determined.**· Viscosity:****Dynamic:** Not determined.**Kinematic:** Not determined.**· 9.2 Other information**

No further relevant information available.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 6)

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** Reacts with alcohols, amines, aqueous acids and alkalis.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

* SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)

| | | |
|--------|------|--------------------------------|
| Oral | LD50 | 11,400 mg/kg (rat) |
| Dermal | LD50 | 22,800 mg/kg (rabbit) (GESTIS) |

CAS: 1675-54-3 bis[4-(2,3-epoxypropoxy)phenyl]propane

| | | |
|--------|------|----------------------|
| Oral | LD50 | 5,000 mg/kg (rat) |
| Dermal | LD50 | 5,000 mg/kg (rabbit) |

CAS: 7727-43-7 barium sulphate, natural

| | | |
|------|------|--------------------------|
| Oral | LD50 | 2,000 mg/kg (rat) (Lit.) |
|------|------|--------------------------|

CAS: 2210-79-9 2,3-epoxypropyl o-tolyl ether

| | | |
|------------|---------|-------------------------------|
| Oral | LD50 | 5,000 mg/kg (rat) |
| Dermal | LD50 | 2,000 mg/kg (rat) |
| Inhalative | LC50/4h | 6,060 mg/m ³ (rat) |

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.

(Contd. on page 8)

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

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 7)

- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity**
Suspected of causing genetic defects.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Toxic for aquatic organisms
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Also poisonous for fish and plankton in water bodies.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

— EU —

(Contd. on page 9)

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

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 8)

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

Containers can be recycled if completely empty; if not, dispose product/containers as dangerous waste. Observe local regulations.

European waste catalogue

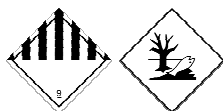
| | |
|-----------|--|
| 08 04 09* | waste adhesives and sealants containing organic solvents or other dangerous substances |
| 15 01 10* | packaging containing residues of or contaminated by dangerous substances |

*** SECTION 14: Transport information****14.1 UN-Number****ADR, IMDG, IATA**

UN3082

14.2 UN proper shipping name**ADR**

UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700)), MARINE POLLUTANT
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight \leq 700))

IMDG**IATA****14.3 Transport hazard class(es)****ADR****Class**

9 (M6) Miscellaneous dangerous substances and articles.

Label

9

IMDG, IATA**Class**

9 Miscellaneous dangerous substances and articles.

Label

9

14.4 Packing group**ADR, IMDG, IATA**

III

14.5 Environmental hazards:

Product contains environmentally hazardous substances: reaction product: bisphenol-A-

(Contd. on page 10)

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

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 9)

- (epichlorhydrin) epoxy resin (number average molecular weight ≤ 700)
 - **Marine pollutant:** Yes
 - **Special marking (ADR):** Symbol (fish and tree)
 - **Special marking (IATA):** Symbol (fish and tree)
 - **14.6 Special precautions for user** Warning: Miscellaneous dangerous substances and articles.
 - **Hazard identification number (Kemler code):** 90
 - **EMS Number:** F-A,S-F
 - **Stowage Category** A
 - **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.
 - **Transport/Additional information:**
-
- **ADR**
 - **Limited quantities (LQ)** 5L
 - **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
 - **Transport category** 3
 - **Tunnel restriction code** E
-
- **IMDG**
 - **Limited quantities (LQ)** 5L
 - **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml
 - **UN "Model Regulation":** UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (REACTION PRODUCT: BISPHENOL-A-(EPICHLORHYDRIN) EPOXY RESIN (NUMBER AVERAGE MOLECULAR WEIGHT ≤ 700)), 9, III

SECTION 15: Regulatory information

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

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**
H228 Flammable solid.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

(Contd. on page 11)

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

Printing date 14.12.2020

Version number 303

Revision: 14.12.2020

Trade name: 2-component liquid metal

(Contd. of page 10)

H319 Causes serious eye irritation.
H341 Suspected of causing genetic defects.
H411 Toxic to aquatic life with long lasting effects.

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

· **Contact:** sdb@ede.de

· **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)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Sol. 1: Flammable solids – Category 1
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Muta. 2: Germ cell mutagenicity – Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**