## Safety data sheet

according to Directive (EC) no. 1907/2006 (REACH) and Directive (EU) no. 830/2015
Trading name: Sealing compound, component B (hardener)

BETTERMANN

Created on: 23.10.2015
Changed on: 25.05.2018
Number of pages: 11

1. Designation of the substance of the mixture and the company
1.1 Product identifier

Trading name: Sealing compound, component B (hardener)
Item number: 7203864
Type: VMS-VW 1
1.2 Relevant identified uses of the substance or mixture and uses we would not recommend

Identified use
Epoxy resin moistener. Moisture-resistant casting for cable glands and cable insulation. For use in the PYROLIQ® casting compound system.
Uses we would not recommend
No other relevant information available.
1.3 Details on the supplier providing the safety data sheet

Manufacturer/supplier
OBO Bettermann Holding GmbH \& Co. KG
P.O. Box 1120

58694 Menden
Germany
Division providing information
Customer Service
Tel.: +49 (0)2373 89-1700
E-mail: export@obo.de
1.4 Emergency telephone number

REACH Registration of Chemicals GmbH
Tel.: +49 (0)700 24112112 (OBO)
2. Possible risks
2.1 Categorisation of substance or mixture

EC Directive 1272/2008 (CLP)


GHS05 irrirtant
Skin Corr. 1B H314: Causes severe skin burns and eye damage.
Eye Dam. 1 H318: Causes serious eye damage.


GHSO7
Acute Tox. 4 H302: Harmful if swallowed.

Acute Tox. 4 H312: Harmful in contact with skin.
Skin Sens. 1 H317: May cause allergic skin reactions.
Aquatic Chronic 3 H 412 : Harmful to aquatic life with long-lasting effects.

### 2.2 Labelling elements

## EC Directive 1272/2008 (CLP)

Hazard pictograms


GHS 05 GHS 07

## Signal word

Danger

## Hazardous components for labelling

3,6-Diazaoctane-1,8-diamine
3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine

## Benzylalcohol

1,3-Benzoldimethanamine

## Risk information

H302+H312: Harmful if swallowed or in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause allergic skin reactions.
H412: Harmful to aquatic life with long-lasting effects.

## Safety information

P260: Do not breathe dust/fumes/gas/mist/vapours/aerosol.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Take the person into the fresh air and make sure breathing is not hindered.
P310: Call a POISON CENTRE or a doctor.
P305+P351+P338: IN CASE OF CONTACT WITH THE EYES: Rinse cautiously with water for several minutes. Remove any contact lenses where possible. Continue rinsing.
P321: Specific treatment (see ... on this label).
P362+364: Take off contaminated clothing. Wash contaminated clothing before reuse.
P405: Store locked up.

### 2.3 Other risks

## Results of PBT and vPvB assessment

- PBT: N/A.
- vPvB: N/A.

3. Composition/details of component parts

### 3.1 Substances

This product is a mixture.

### 3.2 Mixtures

Description: Mixture of the substances listed below with non-hazardous additions.

| Hazardous contents: |  |  |
| :---: | :---: | :---: |
| CAS: 112-24-3 | 3,6-Diazaoctane-1,8-diamine | >30- |
| EINECS: 203-950-6 | Skin Corr. 1B, H314; ©! Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412 | <40\% |


| CAS: 100-51-6 <br> EINECS: 202-859-9 | Benzylalcohol <br> Acute Tox. 4, H302; Acute Tox. 4, H332 | $\begin{aligned} & >15- \\ & <25 \% \end{aligned}$ |
| :---: | :---: | :---: |
| CAS: 2855-13-2 <br> EINECS: 220-666-8 | 3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine <br> Skin Corr. 1B, H314; © ${ }^{〔}$ Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; Aquatic Chronic 3, H412 | $\begin{aligned} & >15- \\ & <25 \% \end{aligned}$ |
| CAS: 1477-55-0 <br> EINECS: 216-032-5 | 1,3-Benzoldimethanamine <br> Skin Corr. 1B, H314; <br> Acute Tox. 4, H302; Acute Tox. 4, H332 | >4-<7\% |
| CAS: 69-72-7 <br> EINECS: 200-712-3 | Salicylic acid <br> Eye Dam. 1, H318; <br> Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335 | >3-<5\% |

## Additional information:

The actual text of the listed hazard information can be found in Section 16.

## 4. First aid measures

### 4.1 Description of the first aid measures

## General information

Remove articles of clothing soiled with the product immediately.
Toxicity symptoms may only occur after several hours. Therefore, ensure medical supervision for at least 48 hours after the accident.

## After inhalation

Ensure a good supply of fresh air and, to be on the safe side, contact a doctor.
If unconscious, position and transport the patient in the recovery position.

## After skin contact

In the case of longer-lasting skin contact, seek medical advice.
Wash off immediately with soap and water and rinse well.

## After eye contact

With the eyelids open, rinse eyes under running water for several minutes and obtain medical advice.

## After ingestion

Contact a doctor immediately.
Drink copious amounts of water and ensure a good supply of fresh air. Obtain immediate medical assistance.

### 4.2 Most important acute and delayed symptoms and effects

No other relevant information available.
4.3 Information for immediate medical aid or special treatment

No other relevant information available.
5. Fire protection measures
5.1 Extinguishing media

Suitable extinguishing media
Agree fire extinguishing measures to the environment.
5.2 Special hazards arising from the substance or mixture

If there is a fire, the following may be released:
Nitrogen oxide (NOx)
Carbon monoxide (CO)
Carbon dioxide (CO2)

### 5.3 Advice for firefighters

Wear a full protection suit.
Wear breathing protection which works independently of the ambient air.

## 6. Measures in the case of unintentional release

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected people away.
6.2 Environmental protection measures

Inform responsible authorities on entry into waterways or sewer system.
Dilute with plenty of water.
Do not let the product enter the sewerage system/surface water/groundwater.
6.3 Methods and material for retention and cleaning

Collect the product with liquid-binding material (e.g. sand, diatomaceous earth, acid binder, universal binder,
sawdust).
Use a neutralisation agent.
Dispose of contaminated material as waste in accordance with Section 13.
Ensure sufficient ventilation.

### 6.4 Reference to other sections

For information on safe handling, see Section 7.
For information on personal protective equipment, see Section 8.
For disposal information, see Section 13.

## 7. Handling and storage

7.1 Protective measures for safe handling

Keep the containers closed tightly.
Ensure good ventilation/extraction at the workstation.
Avoid aerosol formation.

## Information on fire and explosion protection

No special measures required.
7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and containers
No special requirements.
Joint storage information:
Store separately from foods.
Additional information on storage conditions:
Keep the containers closed tightly.
Storage class:
Classification according to operating safety directive (BetrSichV): -
7.3 Specific end applications

No other relevant information available.
8. Limitation and monitoring of the exposure/personal protective equipment
8.1 Parameters to be monitored

| Components with workplace-related limit values to be monitored: |  |
| :--- | :--- |
| 112-24-3 | 3,6-Diazaoctane-1,8-diamine |
| MAK | As vapour and aerosol;cf. Sect. IV |

## 111-40-0 3-Azapentane-1,5-diamine

| MAK | cf. Sect. IV |
| :--- | :--- |

## Additional information:

The basis was the lists compiled during creation.

### 8.2 Limitation and monitoring of exposure

## Personal protective equipment

General protection and hygiene measures:
Keep away from food, drinks and feed.
Take off soiled, saturated clothing immediately.
Wash your hands before breaks and after completing work.
Avoid contact with the eyes and skin.

## Respiratory protection

For short-term or low exposure with breathing filter device; in cases of intensive or longer exposure, use a breathing protection device which works independently of the ambient air.

## Hand protection

Not required.


Protective gloves
The glove material must be impermeable and resistant to the product/the substance/the preparation.
Due to missing tests, it is not possible to recommend a glove material for the product/the preparation/the chemical mixture.
The selection of the glove material must include observance of the penetration times, permeation rates and degradation.

## Glove material

The selection of a suitable glove is not only dependent on the material, but on other quality characteristics, and differs from manufacturer to manufacturer. As the product is a combination of multiple substances, the resistance of glove materials cannot be calculated in advance and must therefore be checked before use.

## Penetration time of the glove material

Contact the protective glove manufacturer for the exact penetration time, which must be complied with.
Eye protection


Tightly closed protective glasses
Physical protection
Protective work clothing

## 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance
Form: Liquid
Colour: Light yellow
Odour: Amino-like
Odour threshold: N/D.
Safety-relevant data
pH value: Alkaline
Change of state

- Melting point/melting range: N/D.
- Boiling point/boiling range: $>200^{\circ} \mathrm{C}$

Ignition point: $>120{ }^{\circ} \mathrm{C}$
Flammability (solid, gaseous): Not applicable.
Ignition temperature: $325{ }^{\circ} \mathrm{C}$
Decomposition temperature: Not determined.
Self-ignition: This product does not self-ignite.
Risk of explosion: This product poses no risk of explosion.
Explosion limits:

- Lower: $1.0 \mathrm{Vol} \%$
- Upper: 10.0 Vol \%

Vapour pressure at $20^{\circ} \mathrm{C}: 0.5 \mathrm{hPa}$
Density at $20^{\circ} \mathrm{C}: 1.03 \mathrm{~g} / \mathrm{cm}^{3}$
Relative density: Not determined.
Vapour density: Not determined.
Vaporisation speed: Not determined.
Solubility/mixability in water: Completely mixable.
Distribution coefficient ( n -octanol/water): Not determined.
Viscosity:

- Dynamic: Undetermined.
- Kinematic at $20^{\circ} \mathrm{C}: 1,000 \mathrm{~mm}^{2} / \mathrm{s}$

Solvent content: Organic solvents: $0.0 \%$

### 9.2 Other data

No other relevant information available.

## 10. Stability and reactivity

### 10.1 Reactivity

No other relevant information available.

### 10.2 Chemical stability

Thermal decomposition/conditions to be avoided:
No decomposition if used correctly.

### 10.3 Possibility of hazardous reactions

No dangerous reactions known.

### 10.4 Conditions to avoid

No decomposition if used correctly.

### 10.5 Incompatible materials

No other relevant information available.

### 10.6 Hazardous decomposition products

Nitrogen oxide (NOx)
Carbon monoxide

## 11. Toxicological data

### 11.1 Data on toxicological effects

## Acute toxicity

Harmful if swallowed or in contact with skin.

## Categorisation-relevant LD/LC50 values: <br> 112-24-3 3,6-Diazaoctane-1,8-diamine

| Oral | LD50 | $2,500 \mathrm{mg} / \mathrm{kg}$ (rat) |
| :--- | :--- | :--- |
| Dermal | LD50 | $805 \mathrm{mg} / \mathrm{kg}$ (rabbit) |
| $\mathbf{1 1 1 - 4 0 - 0 ~ 3 - A z a p e n t a n e - 1 , 5 - d i a m i n e ~}$ |  |  |
| Oral | LD50 | $1,080 \mathrm{mg} / \mathrm{kg}$ (rat) |
| Dermal | LD50 | $1,090 \mathrm{mg} / \mathrm{kg}$ (rabbit) |

## Primary irritant effect:

## Corrosive/irritating to the skin

Causes severe skin burns and eye damage.

## Serious eye damage/irritation

Avoid contact with the eyes.
Causes serious eye damage.

## Sensitisation of the airways/skin

May cause an allergic skin reaction.

## CMS impacts (carcinogenic, DNA-modifying and reproductive system impact)

- Germ cell mutagenicity: On the basis of the available data, the classification criteria are not fulfilled.
- Carcinogenicity: On the basis of the available data, the classification criteria are not fulfilled.
- Reproductive toxicity: On the basis of the available data, the classification criteria are not fulfilled.


## Specific target organ toxicity with single exposure

On the basis of the available data, the classification criteria are not fulfilled.

## Specific target organ toxicity with repeated exposure

On the basis of the available data, the classification criteria are not fulfilled.

## Aspiration risk

On the basis of the available data, the classification criteria are not fulfilled.

## 12. Environmental data

### 12.1 Toxicity

Aquatic toxicity: No other relevant information available.

### 12.2 Persistence and degradability

Not easily biologically degradable.

### 12.3 Bioaccumulation potential

No other relevant information available.

### 12.4 Mobility in soil

No other relevant information available. Results of PBT and vPvB assessment

## Ecotoxic impacts:

Note: Harmful to fish.
Additional ecological information:

## General information:

## Water hazard class 2 (self-categorisation):

Very hazardous to water
Do not let the product enter the groundwater, the waterways or the sewerage system.
May not enter the wastewater or outlet channel in an undiluted or unneutralised form.
Hazardous to drinking water, even when small quantities escape into the soil.
Harmful to aquatic organisms.

### 12.5 Other adverse effects

Results of PBT and vPvB assessment

- PBT: N/A.
- vPvB: N/A.


## 13. Disposal information

### 13.1 Waste treatment method

## Recommendation:

Must be passed to an approved special waste incineration system, subject to compliance with the special waste regulations after pretreatment.
May not be disposed of together with domestic waste. Do not let them enter the sewerage system.

| European Waste Directory |  |
| :--- | :--- |
| $070204^{*}$ | Other organic solvents, washing fluids and bitterns |

## Soiled packaging

Recommendation:
Disposal according to official regulations.

## Recommended cleaning agent:

Alcohol
Water, possibly with addition of cleaning agents.

## 14. Transport information

### 14.1 UN number

ADR, IMDG, IATA
UN1760

### 14.2 Current UN shipment designation

ADR
1760 CORROSIVE LIQUID, N.A.G. (TRIETHYLENTETRAMINE, DIETHYLENTRIAMINE)
IMDG, IATA
CORROSIVE LIQUID, N.O.S (TRIETHYLENTETRAMINE, DIETHYLENTRIAMINE)

### 14.3 Transport risk classes

ADR, IMDG, IATA


## Class 8

Corrosive substances
Hazard label 8

### 14.4 Packaging group

ADR, IMDG, IATA
II

### 14.5 Environmental risks <br> Marine pollutant: <br> No

14.6 Special precautionary measures for the user

Caution: Corrosive substances

## Kemler number:

EMS number:
F-A,S-B
Segregation groups:
Alkalis
14.7 Mass good transportation according to Appendix II of the MARPOL agreement 73/78 and according to the IBC code
N/A.
Transport/additional information:
ADR
Limited quantity (LQ)
1 L
Excepted quantities (EQ) Code:
E2
Maximum net quantity per inner packaging:
30 ml
Maximum net quantity per outer packaging:
500 ml
Transport category:
2
Tunnel limitation code:
E
IMDG
Limited quantities (LQ):
1 L
Excepted quantities (EQ) Code:
E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":
UN1760 CORROSIVE LIQUID, N. A.G. (TRIETHYLENTETRAMINE, DIETHYLENTRIAMINE), 8, II

## 15. Legal specification

15.1 Specifications regarding safety, health and environmental protection/specific legal specifications for the substance or the mixture

Labelling according to Directive (EU) No. 1272/2008
The product is classified and labelled according to the CLP directive.

## Hazard pictograms



GHS05 GHS07
Signal word
Danger
Hazardous components for labelling:
3,6-Diazaoctane-1,8-diamine
3-Aminomethyl-3,5,5-trimethyl-cyclohexylamine
Benzylalcohol

## 1,3-Benzoldimethanamine

## Risk information

H302+H312: Harmful if swallowed or in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause allergic skin reactions.
H412: Harmful to aquatic life with long-lasting effects.

## Safety information

P260: Do not breathe dust/fumes/gas/mist/vapours/aerosol.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Take the person into the fresh air and make sure breathing is not hindered.
P310: Call the POISON CENTRE or a doctor.
P305+P351+P338: IN CASE OF CONTACT WITH THE EYES: Rinse cautiously with water for several minutes. Remove any contact lenses where possible. Continue rinsing.
P321: Specific treatment (see ... on this label).
P362+364: Take off contaminated clothing. Wash contaminated clothing before reuse.
P405: Store locked up.
DIRECTIVE (EC) No. 1907/2006 APPENDIX XVII Restriction conditions: 3
National specifications - Germany
Water hazard class:
WHC 2 (Self-categorisation): Very hazardous to water.

### 15.2 Chemical safety assessment

A chemical safety assessment was not carried out.

## 16. Other data

This data is provided according to our latest knowledge, but does not provide any guarantee of product properties and does not provide any legal guarantee.

## Relevant statements

H302: Harmful if swallowed.
H312: Harmful in contact with skin.
H314: Causes severe skin burns and eye damage.
H315: Causes skin irritation.
H317: May cause allergic skin reactions.
H318: Causes serious eye damage.
H332: Harmful to health if inhaled.
H335: May cause respiratory irritation.
H412: Harmful to aquatic life with long-lasting effects.
Data sheet of issuing area
Department: Technical documentation

## Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
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)
LC50: Lethal concentration, 50\%
LD50: Lethal dose, 50\%
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
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

