

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name

Hardener for 2K Epoxy Primer 1:1

Product no.

4-415-0500

REACH registration number

Not applicable

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

Relevant identified uses of the substance or mixture

Bodywork protector treatment. Only for professional use.

Uses advised against

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The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet

Company and address

August Handel GmbH
Heinrich-Hertz-Str. 3b
DE-14532 Kleinmachnow b. Berlin
Germany
Phone: +49 30 217333 00

Contact person

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E-mail

info@augusthandel.com

SDS date

2017-06-21

SDS Version

1.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flam. Liq. 3; H226
Asp. Tox. 1; H304
Acute Tox. 4; H312 + H332
Skin Irrit. 2; H315
Eye Dam. 1; H318
STOT SE 3; H335
STOT RE 2; H373
See full text of H-phrases in section 2.2.

2.2. Label elements

Hazard pictogram(s)**Signal word**

Danger

Hazard statement(s)

Flammable liquid and vapour. (H226)
 May be fatal if swallowed and enters airways. (H304)
 Harmful in contact with skin or if inhaled. (H312 + H332)
 Causes skin irritation. (H315)
 Causes serious eye damage. (H318)
 May cause respiratory irritation. (H335)
 May cause damage to organs through prolonged or repeated exposure. (H373)

Safety statement(s)

General If medical advice is needed, have product container or label at hand. (P101).
 Keep out of reach of children. (P102).
Prevention Wear protective gloves/protective clothing. (P280).
Response Call a POISON CENTER/doctor if you feel unwell. (P312).
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338).
Storage Store locked up. (P405).
Disposal Dispose of contents/container to an approved waste disposal plant. (P501).

Identity of the substances primarily responsible for the major health hazards

xylene, Butan-1-ol

2.3. Other hazards

This product contains substances that can cause chemical pneumonia if inhaled. The symptoms of chemical pneumonia may appear after several hours.
 This product contains an organic solvent. Repeated or prolonged exposure to organic solvents may result in adverse effects to the nervous system and internal organs such as liver and kidneys.

Additional labelling

Do not use in paint spraying equipment.

Additional warnings

Tactile warning. If this product is sold in retail, it must be delivered with child-resistant fastening.

VOC

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SECTION 3: Composition/information on ingredients

3.1/3.2. Substances/Mixtures

| | |
|----------------------|--|
| NAME: | xylene |
| IDENTIFICATION NOS.: | CAS-no: 1330-20-7 EC-no: 215-535-7 Index-no: 601-022-00-9 |
| CONTENT: | 50-65%% |
| CLP CLASSIFICATION: | Flam. Liq. 3, Acute Tox. 4, STOT RE 2, STOT SE 3, Skin Irrit. 2, Asp. Tox. 1 H226, H304, H312, H315, H332, H335, H373 |
| NOTE: | SL |
| NAME: | 1-methoxypropan-2-ol |
| IDENTIFICATION NOS.: | CAS-no: 107-98-2 EC-no: 203-539-1 Index-no: 603-064-00-3 |
| CONTENT: | 12-16%% |
| CLP CLASSIFICATION: | Flam. Liq. 3, STOT SE 3 H226, H336 |
| NOTE: | SL |
| NAME: | Butan-1-ol |
| IDENTIFICATION NOS.: | CAS-no: 71-36-3 EC-no: 200-751-6 Index-no: 603-004-00-6 |
| CONTENT: | 2-3%% |
| CLP CLASSIFICATION: | Flam. Liq. 3, Acute Tox. 4, STOT SE 3, Skin Irrit. 2, Eye Dam. 1 H226, H302, H315, H318, H335, H336 |
| NOTE: | S |

(*) See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.
 S = Organic solvent L = European occupational exposure limit.

Other information

ATEmix(inhale, vapour) = 14,664 - <= 20
 ATEmix(Dermal) = 1466,664 - <= 2000
 ATEmix(oral) > 2000
 Eye Cat. 1 Sum = Sum(Ci/S(G)CLi) = > 1 - 1,2

Skin Cat. 2 Sum = Sum(Ci/S(G)CLi) = 5,04 - 7,56

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. The doctor can contact The National Poisons Information Service (dial 111, 24 h service). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Bring the injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with soap and water. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

Remove contact lenses. Flush eyes with plenty of water or salt water (20-30°C) for at least 15 minutes and continue until irritation stops. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing.

Ingestion

Do not induce vomiting! If vomiting occurs, keep head facing down to prevent vomit entering the lungs. Call a doctor or ambulance. Symptoms of chemical pneumonia can appear after several hours. People who have swallowed the product should be kept under medical attention for a minimum of 48 hours.

Burns

Rinse with water until the pain stops then continue to rinse for a further 30 minutes.

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

This product contains substances that can cause chemical pneumonia if inhaled. The symptoms of chemical pneumonia may appear after several hours.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

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

Information to medics

Bring this safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous catabolic substances are produced. These are: Carbon oxides. Fire will result in dense black smoke. Exposure to combustion products may harm your health. Fire fighters should wear appropriate protection equipment. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

5.3. Advice for firefighters

No specific requirements.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid inhalation of vapours from spilled material. Avoid direct contact with spilled substances. Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

6.2. Environmental precautions

No specific requirements.

6.3. Methods and material for containment and cleaning up

Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations. To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section on "Disposal considerations" in regard of handling of waste. See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid static electricity. Protect electrical equipment in accordance with current standards. To divert static electricity during transmission, containers must be grounded and connected by wire with the receiving containers. Do not use spark-forming tools.

Smoking, storage of tobacco, consumption and storage of food or liquids are not allowed in the workrooms. See section on 'Exposure controls/personal protection' for information on personal protection. Avoid direct contact with the product.

7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original container. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Storage temperature

Room temperature 18 to 23°C

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OEL

Butan-1-ol

Long-term exposure limit (8-hour TWA reference period): - ppm | - mg/m³

Short-term exposure limit (15-minute reference period): 50 ppm | 154 mg/m³

Comments: Sk (Sk = Can be absorbed through skin.)

1-methoxypropan-2-ol

Long-term exposure limit (8-hour TWA reference period): 100 ppm | 375 mg/m³

Short-term exposure limit (15-minute reference period): 150 ppm | 560 mg/m³

Comments: Sk (Sk = Can be absorbed through skin.)

xylene

Long-term exposure limit (8-hour TWA reference period): 50 ppm | 220 mg/m³

Short-term exposure limit (15-minute reference period): 100 ppm | 441 mg/m³

Comments: Sk BMGV (Bmgv = Biological Monitoring Guidance Value. Sk = Can be absorbed through skin.)

DNEL / PNEC

DNEL (xylene): 180 mg/kg

Exposure: Dermal

Duration of Exposure: Long term – Systemic effects - Workers

DNEL (xylene): 289 mg/m³

Exposure: Inhalation

Duration of Exposure: Short term – Systemic effects - Workers

DNEL (xylene): 289 mg/m³

Exposure: Inhalation

Duration of Exposure: Short term – Local effects - Workers

DNEL (xylene): 77 mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Systemic effects - Workers

DNEL (xylene): 77 mg/m³

Exposure: Inhalation

Duration of Exposure: Long term – Local effects - Workers

DNEL (Butan-1-ol): 154 mg/m³

Duration of Exposure: Short term

Remarks: 50 ppm
 PNEC (xylene): 0,327 mg/l
 Exposure: Freshwater
 PNEC (xylene): 12,46 mg/kg
 Exposure: Freshwater sediment
 PNEC (xylene): 2,31 mg/kg
 Exposure: Soil
 PNEC (xylene): 6,58 mg/l
 Exposure: Sewage Treatment Plant

8.2. Exposure controls

Compliance with the accepted occupational exposure limits values should be controlled on a regular basis.

General recommendations

Observe general occupational hygiene standards.

Exposure scenarios

In the event exposure scenarios are appended to the safety data sheet, the operational conditions and risk management measures in these shall be complied with.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above). Installation of an exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure

Keep containment materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment



Generally

Use only CE marked protective equipment.

Respiratory Equipment

Recommended: Combination filter A2P3. Class 2/3. Brown/White

Skin protection

Wear appropriate protection clothing, e.g. coveralls in polypropylene approved type 6 and Category III.

Hand protection

Recommended: Natural rubber (latex)

Eye protection

Wear safety glasses with side shields.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|--------------------|
| Form | Liquid |
| Colour | Colourless |
| Odour | Solvent |
| Odour threshold (ppm) | No data available. |
| pH | No data available. |
| Viscosity (40°C) | 5000-8000 mPas |
| Density (g/cm ³) | 0,89 |
| Phase changes | |
| Melting point (°C) | -25 |
| Boiling point (°C) | 124-145 |
| Vapour pressure | No data available. |
| Decomposition temperature (°C) | No data available. |
| Evaporation rate (n-butylacetate = 100) | No data available. |
| Data on fire and explosion hazards | |
| Flash point (°C) | 23 |

Ignition (°C)

No data available.

Auto flammability (°C)

315

Explosion limits (% v/v)

No data available.

Explosive properties

No data available.

Solubility

Solubility in water

Insoluble

n-octanol/water coefficient

No data available.

9.2. Other information

Solubility in fat (g/L)

No data available.

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

No data available

10.2. Chemical stability

The product is stable under the conditions, noted in the section "Handling and storage".

10.3. Possibility of hazardous reactions

Nothing special

10.4. Conditions to avoid

Avoid static electricity. Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

| Substance | Species | Test | Route of exposure | Result |
|----------------------|---------|------|-------------------|-------------------------|
| Butan-1-ol | Rat | LD50 | Oral | 2292 mg/kg |
| Butan-1-ol | Rabbit | LD50 | Dermal | 3430 mg/kg |
| Butan-1-ol | Rat | LC50 | Inhalation | 17.76 mg/m ³ |
| 1-methoxypropan-2-ol | Rat | LD50 | Oral | 7200 mg/kg |
| 1-methoxypropan-2-ol | Rabbit | LD50 | Dermal | >13000 mg/kg |
| 1-methoxypropan-2-ol | Rat | LC50 | Inhalation | >13000 mg/l 4h |
| xylene | Rat | LD50 | Oral | 4300 mg/kg |
| xylene | Rabbit | LD50 | Dermal | 2000 mg/kg |
| xylene | Rat | LC50 | Inhalation | 22,1 mg/m ³ |

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

May be fatal if swallowed and enters airways.

Long term effects

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated

exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

SECTION 12: Ecological information

12.1. Toxicity

| Substance | Species | Test | Duration | Result |
|----------------------|------------|------|----------|-----------------|
| Butan-1-ol | Daphnia | EC50 | 48h | 1328 mg/l |
| Butan-1-ol | Algae | EC50 | 72h | 8500 mg/l |
| Butan-1-ol | Crustacean | LC50 | 96h | 1376 mg/l |
| 1-methoxypropan-2-ol | Fish | LC50 | 96h | 4600-10000 mg/l |
| 1-methoxypropan-2-ol | Daphnia | LC50 | 48h | 23300 mg/l |
| xylene | Daphnia | EC50 | 24 h | 96 mg/l |
| xylene | Daphnia | EC50 | 48 h | >1 - 10 mg/l |
| xylene | Algae | IC50 | 72 h | 2,2 mg/l |
| xylene | Fish | LC50 | 96 h | 13,5 mg/l |

12.2. Persistence and degradability

| Substance | Biodegradability | Test | Result |
|--------------------|------------------|------|--------|
| No data available. | | | |

12.3. Bioaccumulative potential

| Substance | Potential bioaccumulation | LogPow | BCF |
|--------------------|---------------------------|--------|-----|
| No data available. | | | |

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

Contains epoxy compounds. See information supplied by the manufacturer.

12.6. Other adverse effects

Nothing special

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

Waste

EWC code

-

Specific labelling

-

Contaminated packing

Contaminated packaging must be disposed of similarly to the product.

SECTION 14: Transport information

14.1 – 14.4

This product is within scope of the regulations of transport of dangerous goods.

ADR/RID

| | |
|----------------------------------|------|
| 14.1. UN number | 1263 |
| 14.2. UN proper shipping name | - |
| 14.3. Transport hazard class(es) | 3 |
| 14.4. Packing group | III |
| Notes | - |
| Tunnel restriction code | - |

IMDG

| | |
|----------------------|------------------------|
| UN-no. | 1263 |
| Proper Shipping Name | PAINT RELATED MATERIAL |
| Class | 3 |
| PG* | III |
| EmS | F-E,S-E |

| | |
|------------------------------|------------------------|
| MP** | No |
| Hazardous constituent | - |
| IATA/CAO | |
| UN-no. | 1263 |
| Proper Shipping Name | PAINT RELATED MATERIAL |
| Class | 3 |
| PG* | III |

14.5. Environmental hazards

-

14.6. Special precautions for user

-

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

No data available

(*) Packing group

(**) Marine pollutant

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

People under the age of 18 shall not be exposed to this product cf. Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

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Additional information**Sources**

Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677. The Stationery Office, 2002.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP).

EC regulation 1907/2006 (REACH).

15.2. Chemical safety assessment

No

SECTION 16: Other information**Full text of H-phrases as mentioned in section 3**

H226 - Flammable liquid and vapour.

H302 - Harmful if swallowed.

H304 - May be fatal if swallowed and enters airways.

H312 - Harmful in contact with skin.

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H332 - Harmful if inhaled.

H335 - May cause respiratory irritation.

H336 - May cause drowsiness or dizziness.

H373 - May cause damage to organs through prolonged or repeated exposure^a.

The full text of identified uses as mentioned in section 1

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Additional label elements

-

Other

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:

The classification of the mixture in regard of physical hazards has been based on experimental data.

The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The safety data sheet is validated by

JW

**Date of last essential change
(First cipher in SDS version)**

-

**Date of last minor change
(Last cipher in SDS version)**

-