

Safety Data Sheet

Hempel's Light Primer Base



Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878 - Germany

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

1.1 Product identifier

Product name : Hempel's Light Primer Base
Product identity : 4555930180
Product type : epoxy primer (base for multi-component product)

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

Field of application : yacht, ships and shipyards.
Ready-for-use mixture : 45550 = 45559 2 vol. / 95360 1 vol. 45551 = 45559 2 vol. / 95360 1 vol.
Identified uses : Consumer applications, Industrial applications, Professional applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details : Hempel (Germany) GmbH
Haderslebener Straße 9
25421 Pinneberg
Tel. (0 41 01) 70 70
Fax. (0 41 01) 70 71 31
hempel@hempel.com

1.4 Emergency telephone number

(0 41 01) 70 70 (08.00 - 17.00)
Austria: Vergiftungsinformationszentrale
+43 1 406 43 43 (24 hrs)
Switzerland: Swiss Toxicological Information Centre
+41 44 251 51 51 (in Switzerland dial 145) (24 hrs)

Date of issue : 18 June 2021

Date of previous issue : 6 July 2020.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226 FLAMMABLE LIQUIDS
Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION
Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION
Skin Sens. 1, H317 SKIN SENSITIZATION
Aquatic Chronic 2, H411 AQUATIC HAZARD (LONG-TERM)

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H226 - Flammable liquid and vapor.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements :

General : Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves. Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Avoid breathing vapor. Wash thoroughly after handling.

Response : Collect spillage. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : middle molecular epoxy resin MMW 700-1200
butan-1-ol

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SECTION 2: Hazards identification

Supplemental label elements : **Warning!** Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
Contains epoxy constituents. May produce an allergic reaction.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

| Product/ingredient name | Identifiers | % | Regulation (EC) No. 1272/2008 [CLP] | Type |
|---|--|-----------|---|---------------|
| middle molecular epoxy resin MMW 700-1200 | REACH #: 01-2119456619-26 EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8 | ≥10 - ≤25 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 | - [1] |
| solvent naphtha (petroleum), light arom. | REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6 | ≥10 - ≤13 | Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 | P [1] [2] |
| xylene | REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9 | ≥5 - ≤10 | Aquatic Chronic 2, H411 Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 | C [1] [2] |
| butan-1-ol | REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6 | ≥5 - ≤6.4 | Skin Irrit. 2, H315 Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 | - [1] |
| titanium dioxide | REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2 | ≥3 - ≤5 | Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336 Carc. 2, H351 (inhalation) | - [1] [2] [*] |
| ethylbenzene | REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4 | ≥1 - ≤3 | Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) | - [1] [2] |
| toluene | REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3 | ≤0.3 | Asp. Tox. 1, H304 Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 See Section 16 for the full text of the H statements declared above. | - [1] [2] |

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit, see section 8.

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

[*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with diameter ≤ 10 µm not bound within a matrix.

SECTION 4: First aid measures

4.1 Description of first aid measures

General :

In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 112 and give immediate treatment (first aid).

Eye contact :

Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.

Inhalation :

Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery position and get medical attention immediately.

Skin contact :

Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Ingestion :

If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.

Protection of first-aiders :

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact :

Causes serious eye damage.

Inhalation :

No known significant effects or critical hazards.

Skin contact :

Causes skin irritation. May cause an allergic skin reaction.

Ingestion :

No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact :

Adverse symptoms may include the following:
pain
watering
redness

Inhalation :

No specific data.

Skin contact :

Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion :

Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :

If gasses have been inhaled, from the decomposition of the product, symptoms may be delayed. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments :

No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :

Recommended: alcohol resistant foam, CO₂, powders, water spray.
Not to be used: waterjet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :

Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products :

Decomposition products may include the following materials: carbon oxides nitrogen oxides halogenated compounds metal oxide/oxides

SECTION 5: Firefighting measures

5.3 Advice for firefighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid all direct contact with the spilled material. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor or mist. Refer to protective measures listed in sections 7 and 8. No action shall be taken involving any personal risk or without suitable training. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material.

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used. Contains epoxy constituents. Avoid all possible skin contact with epoxy and amine containing products, they may cause allergic reactions.

Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Exposure limit values |
|---|---|
| Solvent naphtha (petroleum), light arom. | EU OEL (Europe). TWA: 120 mg/m ³ 8 hours. Form: Tentativ TWA: 25 ppm 8 hours. Form: Tentativ |
| xylene | TRGS 900 OEL (Germany, 10/2020). Absorbed through skin. TWA: 220 mg/m ³ 8 hours. PEAK: 440 mg/m ³ 15 minutes. TWA: 50 ppm 8 hours. PEAK: 100 ppm 15 minutes. DFG MAC-values list (Germany, 8/2020). Absorbed through skin. TWA: 50 ppm 8 hours. PEAK: 100 ppm, 4 times per shift, 15 minutes. TWA: 220 mg/m ³ 8 hours. PEAK: 440 mg/m ³ , 4 times per shift, 15 minutes. |
| butan-1-ol | TRGS 900 OEL (Germany, 10/2020). TWA: 310 mg/m ³ 8 hours. PEAK: 310 mg/m ³ 15 minutes. TWA: 100 ppm 8 hours. PEAK: 100 ppm 15 minutes. DFG MAC-values list (Germany, 8/2020). TWA: 100 ppm 8 hours. PEAK: 100 ppm, 4 times per shift, 15 minutes. TWA: 310 mg/m ³ 8 hours. PEAK: 310 mg/m ³ , 4 times per shift, 15 minutes. |
| ethylbenzene | TRGS 900 OEL (Germany, 10/2020). Absorbed through skin. PEAK: 176 mg/m ³ 15 minutes. PEAK: 40 ppm 15 minutes. TWA: 88 mg/m ³ 8 hours. TWA: 20 ppm 8 hours. DFG MAC-values list (Germany, 8/2020). Absorbed through skin. PEAK: 40 ppm, 4 times per shift, 15 minutes. PEAK: 176 mg/m ³ , 4 times per shift, 15 minutes. TWA: 88 mg/m ³ 8 hours. TWA: 20 ppm 8 hours. |
| toluene | TRGS 900 OEL (Germany, 10/2020). Absorbed through skin. TWA: 190 mg/m ³ 8 hours. PEAK: 760 mg/m ³ 15 minutes. TWA: 50 ppm 8 hours. PEAK: 200 ppm 15 minutes. DFG MAC-values list (Germany, 8/2020). Absorbed through skin. TWA: 50 ppm 8 hours. PEAK: 100 ppm, 4 times per shift, 15 minutes. TWA: 190 mg/m ³ 8 hours. PEAK: 380 mg/m ³ , 4 times per shift, 15 minutes. |

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

| Product/ingredient name | Type | Exposure | Value | Population | Effects |
|---|------|----------------------|-----------------------|------------|----------|
| Solvent naphtha (petroleum), light arom. | DNEL | Long term Dermal | 25 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 150 mg/m ³ | Workers | Systemic |
| xylene | DNEL | Long term Inhalation | 77 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 180 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 221 mg/m ³ | Workers | Systemic |
| ethylbenzene | DNEL | Long term Dermal | 212 mg/kg | Workers | Systemic |
| | DNEL | Long term Dermal | 180 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 77 mg/m ³ | Workers | Systemic |
| toluene | DNEL | Long term Dermal | 384 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 192 mg/m ³ | Workers | Systemic |

Predicted effect concentrations

SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|-------------------------|--|---|----------------------------|
| xylene | Fresh water Marine water Fresh water sediment Marine water sediment Soil Sewage Treatment Plant | 0.327 mg/l 0.327 mg/l 12.46 mg/kg 12.46 mg/kg 2.31 mg/kg 6.68 mg/l | - - - - - - |
| ethylbenzene | Fresh water Marine water Sewage Treatment Plant | 0.1 mg/l 0.01 mg/l 9.6 mg/l | - - - |
| toluene | Fresh water sediment Soil Fresh water Marine water Sewage Treatment Plant | 13.7 mg/kg 2.68 mg/kg 0.68 mg/l 0.68 mg/l 13.61 mg/l | - - - - - |
| | Fresh water sediment Marine water sediment Soil | 16.39 mg/kg 16.39 mg/kg 2.89 mg/kg | - - - |

8.2 Exposure controls

Appropriate engineering controls

Arrange sufficient ventilation by local exhaust ventilation and good general ventilation to keep the airborne concentrations of vapors or dust lowest possible and below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the workstation location.

Individual protection measures

General :

Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.

Where personal protection equipment is required this shall be chosen in accordance with German BGR regulations of the "Berufsgenossenschaften".

Hygiene measures :

Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Eye/face protection :

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, 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 instead.

Hand protection :

Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. The quality of the chemical-resistant protective gloves must be chosen as a function of the specific workplace concentrations and quantity of hazardous substances.

Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice:

Recommended: Silver Shield / Barrier / 4H gloves, polyvinyl alcohol (PVA), Viton®

May be used: nitrile rubber

Short term exposure: neoprene rubber, butyl rubber, natural rubber (latex), polyvinyl chloride (PVC)

Body protection :

Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.

Wear suitable protective clothing. Always wear protective clothing when spraying.

Respiratory protection :

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If working areas have insufficient ventilation: When the product is applied by means that will not generate an aerosol such as, brush or roller wear half or totally covering mask equipped with gas filter of type A, when grinding use particle filter of type P. Be sure to use an approved/certified respirator or equivalent.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|--|---|
| Physical state : | Liquid. |
| Color : | Blue. |
| Odor : | Solvent-like |
| pH : | Testing not relevant or not possible due to nature of the product. |
| Melting point/freezing point : | 950°C This is based on data for the following ingredient: Talc (non-asbestiform) |
| Boiling point/boiling range : | Testing not relevant or not possible due to nature of the product. |
| Flash point : | Closed cup: 24°C (75.2°F) |
| Evaporation rate : | Testing not relevant or not possible due to nature of the product. |
| Flammability : | Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. Flammable in the presence of the following materials or conditions: oxidizing materials. Slightly flammable in the presence of the following materials or conditions: reducing materials. |
| Lower and upper explosive (flammable) limits : | 0.8 - 11.3 vol % |
| Vapor pressure : | Testing not relevant or not possible due to nature of the product. |
| Vapor density : | Testing not relevant or not possible due to nature of the product. |
| Specific gravity : | 1.402 g/cm ³ |
| Solubility(ies) : | Partially soluble in the following materials: cold water and hot water. |
| Partition coefficient (LogKow) : | Testing not relevant or not possible due to nature of the product. |
| Auto-ignition temperature : | Lowest known value: 280 - 470°C (536 - 878°F) (Solvent naphtha (petroleum), light arom.). |
| Decomposition temperature : | Testing not relevant or not possible due to nature of the product. |
| Viscosity : | Aspiration hazard (H304) Not classified. Testing not relevant due to nature of the product. |
| Explosive properties : | Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. |
| Oxidizing properties : | Testing not relevant or not possible due to nature of the product. |

9.2 Other information

| | |
|--------------------------------------|---|
| Solvent(s) % by weight : | Weighted average: 30 % |
| Water % by weight : | Weighted average: 0 % |
| VOC content : | 424.4 g/l |
| VOC content, Ready-for-use mixture : | 435.8 g/l |
| TOC Content : | Weighted average: 336 g/l |
| Solvent Gas : | Weighted average: 0.101 m ³ /l |

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidizing materials.
Reactive or incompatible with the following materials: reducing materials.

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SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides nitrogen oxides halogenated compounds metal oxide/oxides

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Exposure to component solvent vapor concentrations may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headaches, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Accidental swallowing may cause stomach pain. Chemical lung inflammation may occur if the product is taken into the lungs via vomiting.

Epoxy and amine containing products can cause skin disorders such as allergic eczema. The allergy may arise after only a short exposure period.

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|---|----------------------|--|------------------------------|
| middle molecular epoxy resin MMW 700-1200 solvent naphtha (petroleum), light arom. | LD50 Dermal LC50 Inhalation Vapor | Rat Rat | >2000 mg/kg 6193 mg/m ³ | - 4 hours |
| xylene | LD50 Dermal LD50 Oral LC50 Inhalation Gas. LC50 Inhalation Vapor | Rabbit Rat Rat | 3160 mg/kg 8400 mg/kg 5000 ppm 6350 ppm | - - 4 hours 4 hours |
| butan-1-ol | LD50 Dermal LD50 Oral | Rabbit Rat | >4200 mg/kg 3523 mg/kg | - - |
| titanium dioxide | LC50 Inhalation Vapor LD50 Dermal | Rat Rabbit | 24000 mg/m ³ >5000 mg/kg | 4 hours - |
| ethylbenzene | LD50 Oral LD50 Dermal | Rat Rabbit | >5000 mg/kg >5000 mg/kg | - - |
| toluene | LD50 Oral LC50 Inhalation Vapor | Rat Rat | 3500 mg/kg >20 mg/l | - 4 hours |
| | LD50 Oral | Rat | 636 mg/kg | - |

Acute toxicity estimates

| Product/ingredient name | Oral mg/kg | Dermal mg/kg | Inhalation (gases) ppm | Inhalation (vapors) mg/l | Inhalation (dusts and mists) mg/l |
|--|--|---------------------------------|------------------------|--------------------------|-----------------------------------|
| Hempel's Light Primer Base solvent naphtha (petroleum), light arom. xylene butan-1-ol ethylbenzene | 12427.8 8400 3523 790 3500 | 13515.2 3160 1100 3400 | 61432.8 5000 | 613.1 24 11 | |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure |
|--|---|----------------------------|-------------|--|
| solvent naphtha (petroleum), light arom. | Eyes - Mild irritant | Rabbit | - | 24 hours 100 microliters |
| xylene | Eyes - Severe irritant Skin - Moderate irritant Skin - Irritant | Rabbit Rabbit Rabbit | - - - | 24 hours 5 milligrams 24 hours 500 milligrams |
| butan-1-ol | Eyes - Severe irritant Skin - Moderate irritant | Rabbit Rabbit | - - | 24 hours 2 milligrams 24 hours 20 milligrams |
| titanium dioxide | Skin - Mild irritant | Human | - | 72 hours 300 Micrograms Intermittent |
| ethylbenzene | Skin - Mild irritant | Rabbit | - | 24 hours 15 milligrams |
| toluene | Respiratory - Mild irritant Eyes - Mild irritant Skin - Moderate irritant | Rabbit Rabbit Rabbit | - - - | 0.5 minutes 100 milligrams 24 hours 20 milligrams |

Sensitizer

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SECTION 11: Toxicological information

| Product/ingredient name | Route of exposure | Species | Result |
|---|-------------------|------------|-------------|
| middle molecular epoxy resin MMW 700-1200 | skin | Guinea pig | Sensitizing |

Mutagenic effects

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

No known significant effects or critical hazards.

Teratogenic effects

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|--|------------|-------------------|------------------------------|
| Solvent naphtha (petroleum), light arom. | Category 3 | | Respiratory tract irritation |
| butan-1-ol | Category 3 | | Narcotic effects |
| 1,2,4-trimethylbenzene | Category 3 | | Respiratory tract irritation |
| toluene | Category 3 | | Narcotic effects |
| | Category 3 | | Respiratory tract irritation |
| | Category 3 | | Narcotic effects |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|----------------|
| ethylbenzene | Category 2 | - | hearing organs |
| toluene | Category 2 | - | - |

Aspiration hazard

| Product/ingredient name | Result |
|--|--------------------------------|
| Solvent naphtha (petroleum), light arom. | ASPIRATION HAZARD - Category 1 |
| ethylbenzene | ASPIRATION HAZARD - Category 1 |
| toluene | ASPIRATION HAZARD - Category 1 |

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitization : Contains middle molecular epoxy resin MMW 700-1200. May produce an allergic reaction.

11.2 Information on other hazards

Endocrine disrupting properties : No known data available in our database.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses. Toxic to aquatic life with long lasting effects.

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---------------------------------|
| middle molecular epoxy resin MMW 700-1200 | Acute EC50 >100 mg/l | Daphnia | 48 hours |
| solvent naphtha (petroleum), light arom. | Acute LC50 >100 mg/l Acute EC50 19 mg/l | Fish Algae - Pseudokirchneriella subcapitata (green algae) | 96 hours 96 hours |
| | Acute EC50 6.14 mg/l Acute LC50 9.22 mg/l | Daphnia - Daphnia magna Fish - Oncorhynchus mykiss (rainbow trout) | 48 hours 96 hours |
| butan-1-ol | Acute EC50 1328 mg/l Acute LC50 1.376 mg/l | Daphnia | 96 hours |
| titanium dioxide | Acute LC50 >100 mg/l Acute LC50 >100 mg/l | Fish Daphnia | 96 hours 48 hours |
| ethylbenzene | Chronic NOEC <1000 µg/l Fresh water | Fish | 96 hours |
| toluene | Chronic NOEC <500000 µg/l Fresh water Chronic NOEC 1000 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata Algae - Pseudokirchneriella subcapitata Daphnia - Daphnia magna | 96 hours 96 hours 21 days |

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SECTION 12: Ecological information

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|--|--|---|----------------------------|----------------------------|
| solvent naphtha (petroleum), light arom. xylene | - OECD 301F Ready Biodegradability - Manometric Respirometry Test - OECD 301D Ready Biodegradability - Closed Bottle Test | >70 % - Readily - 28 days 90 - 98 % - Readily - 28 days >60 % - Readily - 28 days 92 % - 20 days >70 % - Readily - 28 days 100 % - Readily - 14 days | - - - - - - | - - - - - - |
| butan-1-ol | | | | |
| ethylbenzene | | | | |
| toluene | | | | |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|--|----------------------------|----------------------------|--|
| solvent naphtha (petroleum), light arom. xylene | - - - - - - | - - - - - - | Readily Readily Readily Readily Readily Readily |
| butan-1-ol | | | |
| ethylbenzene | | | |
| toluene | | | |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---|--------------------------|-------------------------------|--------------------|
| middle molecular epoxy resin MMW 700-1200 solvent naphtha (petroleum), light arom. xylene | 2.64 - 3.78 - 3.12 | 31 10 - 2500 8.1 - 25.9 | low high low |
| butan-1-ol | 1 | 3.16 | low |
| ethylbenzene | 3.6 | - | low |
| toluene | 2.73 | 90 | low |

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : No known data available in our database.

Mobility : No known data available in our database.

12.5 Results of PBT and vPvB assessment

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|---|-----|---|---|---|------|----|----|
| This mixture does not contain any substances that are assessed to be a PBT or a vPvB. | | | | | | | |

12.6 Endocrine disrupting properties

No known data available in our database.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

European waste catalogue no. (EWC) is given below.

European waste catalogue (EWC) : 08 01 11*

Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Empty containers or liners may retain some product residues.

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SECTION 14: Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.

| 14.1 UN / ID no. | 14.2 Proper shipping name | 14.3 Transport hazard class(es) | 14.4 PG* | 14.5 Env* Additional information |
|---------------------|---|---|-------------|---|
| ADR/RID Class | UN1263 PAINT | 3   | III | Yes. The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Tunnel code</u> (D/E) |
| IMDG Class | UN1263 PAINT. (middle molecular epoxy resin MMW 700-1200) | 3   | III | Yes. The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Emergency schedules</u> F-E, S-E |
| IATA Class | UN1263 PAINT | 3  | III | Yes. The environmentally hazardous substance mark may appear if required by other transportation regulations. |

PG* : Packing group

Env.* : Environmental hazards

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorization - Substances of very high concern

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

Seveso category This product is controlled under the Seveso III Directive.

| Seveso category |
|---|
| P5c: Flammable liquids 2 and 3 not falling under P5a or P5b |
| E2: Hazardous to the aquatic environment - Chronic 2 |

National regulations

Austria

VbF class : A II
Very dangerous flammable liquid.

Limitation of the use of organic solvents : Forbidden

Germany

Storage code : 3

Hazardous incident ordinance : This product is controlled under the Germany Hazardous Incident Ordinance.

Hazard class for water : 3

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SECTION 15: Regulatory information

Technical instruction on air quality control : TA-Luft Number 5.2.5: 27.6%
TA-Luft Class II - Number 5.2.5: 15.3%
TA-Luft Class II - Number 5.2.2: 8.2%
TA-Luft Class III - Number 5.2.2: 2.3%
TA-Luft Class I - Number 5.2.5: 0.1%

AOX : The product contains organically bound halogens and can contribute to the AOX value in waste water.

References : **Other Rules:**
- BGR 190 (Rules for the use of respiratory protective equipment)
- BGR 192 (Rules for the use of eye and face protection)
- BGR 195 (Rules for the use of gloves)

Switzerland

VOC content : 30.2 % (w/w)

National regulations Non-GHS

| List name | Product/ingredient name | Name on list | Classification | Notes |
|--|-------------------------|---------------------------------------|------------------------|-------|
| DFG MAC-values list | xylene | Xylene (all isomers) | Listed | - |
| DFG MAC-values list | butan-1-ol | n-Butyl alcohol; n-Butanol | Listed | - |
| DFG MAC-values list | titanium dioxide | Titanium dioxide (inhalable fraction) | K3 | - |
| DFG MAC-values list | ethylbenzene | Ethylbenzene | K3 | - |
| DFG MAC-values list | toluene | Toluol; Toluene | Listed | - |
| Switzerland Occupational Exposure Limits | toluene | Toluol | Reproto. R2F, Dev. R2D | - |

15.2 Chemical Safety Assessment

SECTION 16: Other information

Abbreviations and acronyms :

ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
EUH statement = CLP-specific Hazard statement
RRN = REACH Registration Number
DNEL = Derived No Effect Level
PNEC = Predicted No Effect Concentration

Full text of abbreviated H statements :
H225 Highly flammable liquid and vapor.
H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] :
Acute Tox. 4 ACUTE TOXICITY - Category 4
Aquatic Chronic 2 AQUATIC HAZARD (LONG-TERM) - Category 2
Asp. Tox. 1 ASPIRATION HAZARD - Category 1
Carc. 2 CARCINOGENICITY - Category 2
Eye Dam. 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 2 FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3 FLAMMABLE LIQUIDS - Category 3
Repr. 2 TOXIC TO REPRODUCTION - Category 2
Skin Irrit. 2 SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1 SKIN SENSITIZATION - Category 1
STOT RE 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT SE 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

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SECTION 16: Other information

| Classification | Justification |
|------------------------------------|-----------------------|
| FLAMMABLE LIQUIDS | On basis of test data |
| SKIN CORROSION/IRRITATION | Calculation method |
| SERIOUS EYE DAMAGE/ EYE IRRITATION | Calculation method |
| SKIN SENSITIZATION | Calculation method |
| AQUATIC HAZARD (LONG-TERM) | Calculation method |

Notice to reader

► Indicates information that has changed from previously issued version.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications.

It is always the duty of the user/employer to ascertain that the work is planned and carried out in accordance with the national regulations.

Safe Use of Mixture Information

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This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet and labels.

General description of the process covered

Indoor or outdoor spray painting by professionals or with brush, roller, putty knife, dipping etc. with good general room ventilation

This safe use information is linked to : Professional spray painting and/or low-energy painting, local effect - Level III
Skin Corr. 1, Eye Dam. 1, Resp. Sens. 1 or EUH071

Sector(s) of use : Industrial uses - Professional uses

Product category(ies) : Coatings and paints, thinners, paint removers

Operational conditions

Place of use : Indoor or outdoor use

Risk management measures (RMM)

| Contributing activity | Process category (ies) | Maximum duration | Ventilation | | Respiratory | Eye | Hands |
|---|------------------------|-------------------|--|-------|--|---|---|
| | | | Type and air changes per hour | | | | |
| Preparation of material for application | PROC05 | More than 4 hours | Good general room ventilation - Outdoors | 3 - 5 | Wear a respirator conforming to EN140 with an assigned protection factor of at least 10. | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Loading of application equipment and handling of coated parts before curing | PROC08a | More than 4 hours | Good general room ventilation - Outdoors | 3 - 5 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Professional application of coatings by brush or roller | PROC10 | More than 4 hours | Good general room ventilation - Outdoors | 3 - 5 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Professional application of coatings by spraying | PROC11 | More than 4 hours | Good general room ventilation - Outdoors | 3 - 5 | Wear a respirator conforming to EN140 with an assigned protection factor of at least 10. | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Film formation - force drying, stoving and other technologies | PROC04 | More than 4 hours | Good general room ventilation - Outdoors | 3 - 5 | None | None | Wear suitable gloves tested to EN374. |
| Cleaning | PROC05 | More than 4 hours | Good general room ventilation - Outdoors | 3 - 5 | Wear a respirator conforming to EN140 with an assigned protection factor of at least 10. | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |
| Waste management | PROC08a | More than 4 hours | Good general room ventilation - Outdoors | 3 - 5 | None | Use eye protection according to EN 166. | Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training. |

See chapter 8 of this Safety Data Sheet for specifications.

