

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878 - United Kingdom: Northern Ireland

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

1.1 Product identifier

Product name : Hempel's Curing Agent 9588W
Product identity : 9588W00000
Product type : curing agent

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

Field of application : used only as part of two- or multi component products
Ready-for-use mixture : (See base component)
Identified uses : Industrial applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details : Hempel UK Ltd
Berwyn House, The Pavilions
Llantarnam Park
Cwmbran
South Wales NP44 3FD
Telephone: 01633 833600
hempel@hempel.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)

01633 833600 (08.00 - 17.00)
See Section 4 of the safety data sheet (first aid measures).

Date of issue : 17 December 2021

Date of previous issue : No previous validation.

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 Corr. 1C, H314 | SKIN CORROSION/IRRITATION |
| Eye Dam. 1, H318 | SERIOUS EYE DAMAGE/EYE IRRITATION |
| Skin Sens. 1, H317 | SKIN SENSITISATION |

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 vapour.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.

Precautionary statements :

Prevention : Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response : IF INHALED: Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. 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.

Hazardous ingredients :
Methylstyrenated phenol
butan-1-ol
2,4,6-tris(dimethylaminomethyl)phenol
bis[(dimethylamino)methyl]phenol
ethylenediamine
3,6-diazaoctanethylenediamine

SECTION 2: Hazards identification

Supplemental label elements :

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 |
|--|---|-----------|--|-------------|
| xylene | REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9 | ≥10 - ≤25 | Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 | [1] [2] |
| Methylstyrenated phenol | REACH #: 01-2119555274-38 EC: 270-966-8 CAS: 68512-30-1 | ≥10 - <25 | Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 3, H412 | [1] |
| butan-1-ol | REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6 | ≥5 - ≤10 | Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336 | [1] |
| 2,4,6-tris(dimethylaminomethyl) phenol | REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2 | ≥5 - ≤10 | Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 | [1] |
| benzyl alcohol | REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5 | ≥3 - ≤5 | Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319 | [1] |
| 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) Asp. Tox. 1, H304 | [1] [2] |
| bis[(dimethylamino)methyl] phenol | EC: 275-162-0 CAS: 71074-89-0 | <1 | Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 | [1] |
| ethylenediamine | REACH #: 01-2119480383-37 EC: 203-468-6 CAS: 107-15-3 | <1 | Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H311 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1B, H334 Skin Sens. 1, H317 Aquatic Chronic 3, H412 | [1] [2] [5] |
| 3,6-diazaoctanethylenediamin | REACH #: 01-2119487919-13 EC: 203-950-6 CAS: 112-24-3 Index: 612-059-00-5 | <1 | Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412 | [1] |

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

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 recognised 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 severe burns. 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, CO ₂ , 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 vapour. 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. |
| Hazardous combustion products : | Decomposition products may include the following materials: carbon oxides nitrogen oxides |

5.3 Advice for firefighters

SECTION 5: Firefighting measures

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 vapour 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 spilt 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).

6.3 Methods and material for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach the 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 spilt 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.

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

| Product/ingredient name | Exposure limit values |
|-------------------------|---|
| xylene | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 441 mg/m ³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 220 mg/m ³ 8 hours. STEL: 100 ppm 15 minutes. |
| butan-1-ol | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 154 mg/m ³ 15 minutes. STEL: 50 ppm 15 minutes. |
| ethylbenzene | EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. |

SECTION 8: Exposure controls/personal protection

| | |
|-----------------|--|
| ethylenediamine | STEL: 552 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 441 mg/m ³ 8 hours. TWA: 100 ppm 8 hours. EU OEL (Europe, 2/2010). Absorbed through skin. (ACGIH) TWA: 10 ppm 8 hours. |
|-----------------|--|

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 |
|---------------------------------------|------|----------------------|------------------------|------------|----------|
| xylene | DNEL | Long term Inhalation | 77 mg/m ³ | Workers | Systemic |
| Methylstyrenated phenol | DNEL | Long term Dermal | 180 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Dermal | 3.5 mg/kg bw/day | Workers | Systemic |
| 2,4,6-tris(dimethylaminomethyl)phenol | DNEL | Long term Inhalation | 1.4 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 0.53 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 0.15 mg/kg bw/day | Workers | Systemic |
| benzyl alcohol | DNEL | Long term Inhalation | 22 mg/m ³ | Workers | Systemic |
| | DNEL | Long term Dermal | 8 mg/kg bw/day | Workers | Systemic |
| ethylbenzene | DNEL | Long term Dermal | 180 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 77 mg/m ³ | Workers | Systemic |
| 3,6-diazaoctanethylenediamin | DNEL | Long term Dermal | 0.57 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 1 mg/m ³ | Workers | Systemic |

Predicted effect concentrations

| Product/ingredient name | Compartment Detail | Value | Method Detail |
|---------------------------------------|------------------------|-----------------|--------------------|
| xylene | Fresh water | 0.327 mg/l | - |
| | Marine water | 0.327 mg/l | - |
| | Fresh water sediment | 12.46 mg/kg | - |
| | Marine water sediment | 12.46 mg/kg | - |
| | Soil | 2.31 mg/kg | - |
| | Sewage Treatment Plant | 6.68 mg/l | - |
| Methylstyrenated phenol | Sewage Treatment Plant | 2.4 mg/l | - |
| | Fresh water | 14 µg/l | - |
| | Marine | 1.4 µg/l | - |
| | Fresh water sediment | 1064 mg/kg dwt | - |
| | Marine water sediment | 106 mg/kg dwt | - |
| 2,4,6-tris(dimethylaminomethyl)phenol | Soil | 212 mg/kg dwt | - |
| | Fresh water | 0.084 mg/l | - |
| | Marine water | 0.0084 mg/l | - |
| | Sewage Treatment Plant | 0.2 mg/l | - |
| benzyl alcohol | Soil | 0.456 mg/kg wwt | Assessment Factors |
| | Sewage Treatment Plant | 39 mg/l | Assessment Factors |
| | Sediment | 5.27 mg/kg wwt | Assessment Factors |
| | Marine water sediment | 0.527 mg/kg wwt | Assessment Factors |
| | Marine | 0.1 mg/l | Assessment Factors |
| ethylbenzene | Fresh water | 1 mg/l | Assessment Factors |
| | Fresh water | 0.1 mg/l | - |
| | Marine water | 0.01 mg/l | - |
| | Sewage Treatment Plant | 9.6 mg/l | - |
| | Fresh water sediment | 13.7 mg/kg | - |
| 3,6-diazaoctanethylenediamin | Soil | 2.68 mg/kg | - |
| | Fresh water | 190 µg/l | - |
| | Fresh water sediment | 95.9 mg/kg | - |
| | Marine water | 38 µg/l | - |
| | Marine water sediment | 19.2 mg/kg | - |
| | Soil | 19.1 mg/kg | - |
| | Sewage Treatment Plant | 4.25 mg/l | - |

8.2 Exposure controls

Appropriate engineering controls

SECTION 8: Exposure controls/personal protection

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 work-station 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. |
| 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 : | <p>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.</p> <p>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:</p> <p>Recommended: Silver Shield / Barrier / 4H gloves, polyvinyl alcohol (PVA), Viton®</p> <p>May be used: nitrile rubber, neoprene rubber, butyl rubber</p> <p>Short term exposure: natural rubber (latex), polyvinyl chloride (PVC)</p> |
| Body protection : | <p>Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.</p> <p>Wear suitable protective clothing. Always wear protective clothing when spraying.</p> |
| 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. When the product is applied by spraying and for continuous or prolonged work always wear an air-fed respirator e.g. hood with supply of fresh or compressed air or a full face, powered air purifying filter. 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. |
| Colour : | Transparent |
| Odour : | Solvent-like |
| pH : | Testing not relevant or not possible due to nature of the product. |
| Melting point/freezing point : | Testing not relevant or not possible due to nature of the product. |
| Boiling point/boiling range : | Testing not relevant or not possible due to nature of the product. |
| Flash point : | Closed cup: 37°C (98.6°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. |
| Lower and upper explosive (flammable) limits : | 0.8 - 13 vol % |
| Vapour pressure : | Testing not relevant or not possible due to nature of the product. |
| Vapour density : | Testing not relevant or not possible due to nature of the product. |
| Specific gravity : | 0.969 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. |

SECTION 9: Physical and chemical properties

| | |
|-----------------------------|--|
| Auto-ignition temperature : | Lowest known value: 355°C (671°F) (butan-1-ol). |
| 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. |
| Oxidising properties : | Testing not relevant or not possible due to nature of the product. |

9.2 Other information

| | |
|--------------------------|------------------------------|
| Solvent(s) % by weight : | Weighted average: 28 % |
| Water % by weight : | Weighted average: 0 % |
| VOC content : | 240 g/l |
| TOC Content : | Weighted average: 192 g/l |
| Solvent Gas : | Weighted average: 0.072 m³/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 pressurise, 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: oxidising materials.

Reactive or incompatible with the following materials: reducing materials.

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

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.

Direct contact with the eyes can cause irreversible damage, including blindness.

Acute toxicity

SECTION 11: Toxicological information

| Product/ingredient name | Result | Species | Dose | Exposure |
|--|--|-----------------------------|--|------------------------------|
| xylene | LC50 Inhalation Gas. LC50 Inhalation Vapour LD50 Dermal LD50 Oral | Rat Rat Rabbit Rat | 5000 ppm 6350 ppm >4200 mg/kg 3523 mg/kg | 4 hours 4 hours - - |
| Methylstyrenated phenol | LC50 Inhalation Dusts and mists LD50 Dermal | Rat Rat | >5 mg/l >2000 mg/kg | 4 hours - |
| butan-1-ol | LC50 Inhalation Vapour LD50 Dermal LD50 Oral | Rat Rabbit Rat | 24000 mg/m ³ 3400 mg/kg 790 mg/kg | 4 hours - - |
| 2,4,6-tris(dimethylaminomethyl) phenol | LD50 Dermal LD50 Oral LD50 Oral | Rabbit Rat Rat | 1465 mg/kg 1200 mg/kg 2169 mg/kg | - - - |
| benzyl alcohol | LC50 Inhalation Dusts and mists LD50 Oral | Rat Rat | >4178 mg/m ³ 1230 mg/kg | 4 hours - |
| ethylbenzene | LD50 Dermal LD50 Oral | Rabbit Rat | >5000 mg/kg 3500 mg/kg | - - |
| ethylenediamine | LC50 Inhalation Vapour LD50 Dermal LD50 Oral | Rat Rabbit Rat | 14.7 mg/l 730 mg/kg 866 mg/kg | 4 hours - - |
| 3,6-diazaoctanethylenediamin | LD50 Dermal LD50 Oral | Rabbit Rat | 550 mg/kg 1716 mg/kg | - - |

Acute toxicity estimates

| Product/ingredient name | Oral mg/kg | Dermal mg/kg | Inhalation (gases) ppm | Inhalation (vapours) mg/l | Inhalation (dusts and mists) mg/l |
|---------------------------------------|------------|--------------|------------------------|---------------------------|-----------------------------------|
| Hempel's Curing Agent 9588W | 5430.9 | 8594.1 | 45681.7 | 164.4 | |
| xylene | 3523 | 1100 | 5000 | | |
| butan-1-ol | 790 | 3400 | | 24 | |
| 2,4,6-tris(dimethylaminomethyl)phenol | 1200 | | | | |
| benzyl alcohol | 1230 | | | 11 | |
| ethylbenzene | 3500 | | | 11 | |
| ethylenediamine | 866 | 730 | | 14.7 | |
| 3,6-diazaoctanethylenediamin | | 550 | | | |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure |
|--|---|----------------------------|-------------|---|
| xylene | Eyes - Severe irritant Skin - Moderate irritant Skin - Irritant | Rabbit Rabbit Rabbit | - - - | 24 hours 5 milligrams 24 hours 500 milligrams - |
| Methylstyrenated phenol | Eyes - Mild irritant Skin - Irritant | Rabbit Rabbit | - - | - - |
| butan-1-ol | Eyes - Severe irritant Skin - Moderate irritant | Rabbit Rabbit | - - | 24 hours 2 milligrams 24 hours 20 milligrams |
| 2,4,6-tris(dimethylaminomethyl) phenol | Eyes - Severe irritant | Rabbit | - | 24 hours 50 Micrograms |
| benzyl alcohol | Skin - Severe irritant Eyes - Visible necrosis Skin - Mild irritant | Rabbit Rabbit Rabbit | - - - | 24 hours 2 milligrams - - |
| ethylbenzene | Skin - Mild irritant Respiratory - Mild irritant Eyes - Mild irritant | Rabbit Rabbit Rabbit | - - - | 24 hours 15 milligrams - - |
| ethylenediamine | Eyes - Severe irritant Skin - Severe irritant | Rabbit Rabbit | - - | 24 hours 750 Micrograms 24 hours 10 milligrams |
| 3,6-diazaoctanethylenediamin | Eyes - Moderate irritant Skin - Severe irritant | Rabbit Rabbit | - - | 24 hours 20 milligrams 24 hours 5 milligrams |

Sensitiser

| Product/ingredient name | Route of exposure | Species | Result |
|------------------------------|-------------------|------------|-------------|
| 3,6-diazaoctanethylenediamin | skin | Guinea pig | Sensitising |

Mutagenic effects

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

SECTION 11: Toxicological information

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 |
|-------------------------|--------------------------|-------------------|--|
| butan-1-ol | Category 3 Category 3 | | Respiratory tract irritation Narcotic effects |

Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

| Product/ingredient name | Result |
|-------------------------|--------------------------------|
| ethylbenzene | ASPIRATION HAZARD - Category 1 |

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitisation : Contains Methylstyrenated phenol, ethylenediamine, 3,6-diazaoctanethylenediamin. 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.

| Product/ingredient name | Result | Species | Exposure |
|--|-------------------------------------|---|----------|
| Methylstyrenated phenol | Acute EC50 15 mg/l | Algae | 72 hours |
| | Acute EC50 14 - 51 mg/l | Daphnia | 48 hours |
| | Acute EC50 25.8 mg/l | Fish | 96 hours |
| butan-1-ol | Acute EC50 1328 mg/l | Daphnia | 96 hours |
| | Acute LC50 1.376 mg/l | Fish | 96 hours |
| 2,4,6-tris(dimethylaminomethyl) phenol | Acute EC50 84 mg/l | Algae | 72 hours |
| benzyl alcohol | Acute LC50 175 mg/l | Fish | 96 hours |
| | Acute EC50 230 mg/l | Daphnia | 48 hours |
| | Acute IC50 770 mg/l | Algae | 72 hours |
| | Acute LC50 460 mg/l | Fish | 96 hours |
| ethylbenzene | Chronic NOEC <1000 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| ethylenediamine | Chronic NOEC 160 µg/l Fresh water | Daphnia - Daphnia magna | 21 days |
| 3,6-diazaoctanethylenediamin | Acute EC50 20 mg/l | Algae | 72 hours |
| | Acute EC50 31.1 mg/l | Daphnia | 48 hours |
| | Acute LC50 330 mg/l | Fish | 96 hours |

12.2 Persistence and degradability

| Product/ingredient name | Test | Result | Dose | Inoculum |
|--|---|-------------------------------|------|----------|
| xylylene | OECD 301F Ready Biodegradability - Manometric Respirometry Test | 90 - 98 % - Readily - 28 days | - | - |
| butan-1-ol | - | >60 % - Readily - 28 days | - | - |
| | OECD 301D Ready Biodegradability - Closed Bottle Test | 92 % - 20 days | - | - |
| 2,4,6-tris(dimethylaminomethyl) phenol | OECD 301D 301D Ready Biodegradability - Closed Bottle Test | 4 % - Not readily - 28 days | - | - |
| benzyl alcohol | OECD 301A 301A Ready Biodegradability - DOC Die-Away Test | 95 - 97 % - Readily - 21 days | - | - |
| | OECD 301C 301C Ready | 92 - 96 % - Readily - 14 days | - | - |

SECTION 12: Ecological information

| ethylbenzene | Biodegradability - Modified MITI Test (I) - | >70 % - Readily - 28 days | - | - |
|---------------------------------------|--|---------------------------|------------------|---|
| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability | |
| xylene | - | - | Readily | |
| Methylstyrenated phenol | - | - | Not readily | |
| butan-1-ol | - | - | Readily | |
| 2,4,6-tris(dimethylaminomethyl)phenol | - | - | Not readily | |
| benzyl alcohol | - | - | Readily | |
| ethylbenzene | - | - | Readily | |

12.3 Bioaccumulative potential

| Product/ingredient name | LogP _{ow} | BCF | Potential |
|---------------------------------------|--------------------|------------|-----------|
| xylene | 3.12 | 8.1 - 25.9 | low |
| Methylstyrenated phenol | 3.627 | - | low |
| butan-1-ol | 1 | 3.16 | low |
| 2,4,6-tris(dimethylaminomethyl)phenol | 0.219 | - | low |
| benzyl alcohol | 0.87 | 1.37 | low |
| ethylbenzene | 3.6 | - | low |
| ethylenediamine | -7.02 | - | low |
| 3,6-diazaoctanethylenediamin | -1.66 - -1.4 | - | 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 minimised 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 minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

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.

SECTION 14: Transport information

| | 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 | UN3469 | PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE | 3 8   | III | No. | Tunnel code (D/E) |
| IMDG Class | UN3469 | PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE | 3 8   | III | No. | Emergency schedules F-E, S-C |
| IATA Class | UN3469 | PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE | 3 8   | III | No. | - |

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 authorisation - Substances of very high concern

Annex XIV

None of the components are listed.

Substances of very high concern

| Ingredient name | Intrinsic property | Status | Reference number | Date of revision |
|-----------------|--|-----------|------------------|------------------|
| ethylenediamine | Substance of equivalent concern for human health | Candidate | ED/61/2018 | 6/27/2018 |

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 |

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 vapour.
 H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H304 May be fatal if swallowed and enters airways.
 H311 Toxic in contact with skin.
 H312 Harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.

SECTION 16: Other information

| | | |
|--|-------------------|--|
| | H319 | Causes serious eye irritation. |
| | H332 | Harmful if inhaled. |
| | H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| | H335 | May cause respiratory irritation. |
| | H336 | May cause drowsiness or dizziness. |
| | H373 | May cause damage to organs through prolonged or repeated exposure. |
| | H412 | Harmful to aquatic life with long lasting effects. |
| Full text of classifications [CLP/GHS] : | Acute Tox. 3 | ACUTE TOXICITY - Category 3 |
| | Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| | Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| | Asp. Tox. 1 | ASPIRATION HAZARD - Category 1 |
| | 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 |
| | Resp. Sens. 1B | RESPIRATORY SENSITISATION - Category 1B |
| | Skin Corr. 1B | SKIN CORROSION/IRRITATION - Category 1B |
| | Skin Corr. 1C | SKIN CORROSION/IRRITATION - Category 1C |
| | Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| | Skin Sens. 1 | SKIN SENSITISATION - Category 1 |
| | Skin Sens. 1B | SKIN SENSITISATION - Category 1B |
| | 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]

| Classification | Justification |
|---|---|
| FLAMMABLE LIQUIDS SKIN CORROSION/IRRITATION SERIOUS EYE DAMAGE/EYE IRRITATION SKIN SENSITISATION | On basis of test data Calculation method Calculation method 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.

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.

