# Safety Data Sheet
## Hempel's Curing Agent 95370

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758 - United Kingdom (UK)

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

### 1.1 Product identifier

Product name : Hempel's Curing Agent 95370

Product identity : 9537000000, 0013B425

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, Professional 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)

UK: **01633 833600** (08.00 - 17.00)
Ireland: **01 809 2166** (National Poisons Information Centre, Monday-Sunday; 08:00-22:00)

See Section 4 of the safety data sheet (first aid measures).

Date of issue : 28 January 2025

Date of previous issue : 17 January 2024.

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Product definition : Mixture

**Classification according to UK CLP/GHS**

| | |
|---|---|
| Flam. Liq. 3, H226 | FLAMMABLE LIQUIDS |
| Acute Tox. 4, H332 | ACUTE TOXICITY (inhalation) |
| Skin Irrit. 2, H315 | SKIN CORROSION/IRRITATION |
| Skin Sens. 1, H317 | SKIN SENSITISATION |
| STOT SE 3, H335 | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) |

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

### 2.2 Label elements

Hazard pictograms :

Signal word : Warning

Hazard statements :

H226 - Flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.

Precautionary statements :

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

Store in a well-ventilated place. Keep container tightly closed.

Hazardous ingredients : hexamethylene diisocyanate, oligomerisation product (biuret type)
hexamethylene-di-isocyanate

Supplemental label elements : Contains isocyanates. May produce an allergic reaction. **As from August 24 2023 adequate training is required before industrial or professional use.**

**Special packaging requirements**

## SECTION 2: Hazards identification

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 | % | GB CLP Classification | Type |
|---|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | REACH #: 01-2119970543-34<br>EC: 500-060-2<br>CAS: 28182-81-2 | ≥50 - ≤75 | Acute Tox. 4, H332<br>Skin Sens. 1, H317<br>STOT SE 3, H335 | [1] [2] |
| 2-methoxy-1-methylethyl acetate | REACH #: 01-2119475791-29<br>EC: 203-603-9<br>CAS: 108-65-6 | ≥10 - <20 | Flam. Liq. 3, H226<br>STOT SE 3, H336 | [1] [2] |
| xylene | REACH #: 01-2119488216-32<br>EC: 215-535-7<br>CAS: 1330-20-7<br>Index: 601-022-00-9 | ≥10 - ≤22 | Flam. Liq. 3, H226<br>Acute Tox. 4, H312<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315 | [1] [2] |
| ethylbenzene | REACH #: 01-2119489370-35<br>EC: 202-849-4<br>CAS: 100-41-4<br>Index: 601-023-00-4 | ≤3 | Flam. Liq. 2, H225<br>Acute Tox. 4, H332<br>STOT RE 2, H373 (hearing organs)<br>Asp. Tox. 1, H304 | [1] [2] |
| hexamethylene-di-isocyanate | REACH #: 01-2119457571-37<br>EC: 212-485-8<br>CAS: 822-06-0<br>Index: 615-011-00-1 | <0.5 | Acute Tox. 4, H302<br>Acute Tox. 1, H330<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Resp. Sens. 1, H334<br>Skin Sens. 1, H317<br>STOT SE 3, H335 | [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.

## 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/advice.

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

Skin contact : Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners. Remove contaminated clothing and shoes.

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

## SECTION 4: First aid measures

**Potential acute health effects**

| | |
|---|---|
| Eye contact : | No known significant effects or critical hazards. |
| Inhalation : | Harmful if inhaled. May cause respiratory irritation. |
| 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:<br>pain or irritation<br>watering<br>redness |
| Inhalation : | Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing |
| Skin contact : | Adverse symptoms may include the following:<br>irritation<br>redness |
| Ingestion : | No specific data. |

### 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.<br>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

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

## SECTION 6: Accidental release measures

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. Contains isocyanates. Exposure to isocyanate may result in acute irritation and/or sensitisation when breathing.
**Care should be taken when re-opening partly-used containers.**

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 as well as of amines, alcohols and water. 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

**Occupational exposure limits**

| Product/ingredient name | Exposure limit values |
|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | **EH40/2005 WELs (United Kingdom (UK), 1/2020) [isocyanates, all, except methyl isocyanate]** Inhalation sensitiser.<br>STEL 15 minutes: 0.07 mg/m³ (as -NCO).<br>TWA 8 hours: 0.02 mg/m³ (as -NCO). |
| 2-methoxy-1-methylethyl acetate | **EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin.<br>STEL 15 minutes: 548 mg/m³.<br>TWA 8 hours: 50 ppm.<br>TWA 8 hours: 274 mg/m³.<br>STEL 15 minutes: 100 ppm. |
| xylene | **EH40/2005 WELs (United Kingdom (UK), 1/2020) [xylene, o-,m-,p- or mixed isomers]** Absorbed through skin.<br>STEL 15 minutes: 441 mg/m³.<br>TWA 8 hours: 50 ppm.<br>TWA 8 hours: 220 mg/m³.<br>STEL 15 minutes: 100 ppm. |
| ethylbenzene | **EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin.<br>STEL 15 minutes: 552 mg/m³.<br>STEL 15 minutes: 125 ppm.<br>TWA 8 hours: 100 ppm.<br>TWA 8 hours: 441 mg/m³. |
| hexamethylene-di-isocyanate | **EH40/2005 WELs (United Kingdom (UK), 1/2020) [isocyanates, all, except methyl isocyanate]** Inhalation sensitiser.<br>STEL 15 minutes: 0.07 mg/m³ (as -NCO).<br>TWA 8 hours: 0.02 mg/m³ (as -NCO). |

**Biological exposure indices**

## SECTION 8: Exposure controls/personal protection

| Product/ingredient name | Exposure limit values |
|---|---|
| xylene | **EH40/2005 BMGVs (United Kingdom (UK), 1/2020) [Xylene, o-, m-, p- or mixed isomers]**<br>BGV: 650 mmol/mol creatinine, methyl hippuric acid [in urine]. Sampling time: post shift. |

**Recommended monitoring procedures**

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 - Population - Exposure | Value | Effects |
|---|---|---|---|
| 2-methoxy-1-methylethyl acetate | DNEL - Workers - Long term - Dermal | 796 mg/kg | Effects: Systemic |
| | DNEL - Workers - Long term - Inhalation | 275 mg/m³ | Effects: Systemic |
| xylene | DNEL - Workers - Long term - Inhalation | 77 mg/m³ | Effects: Systemic |
| | DNEL - Workers - Long term - Dermal | 212 mg/kg bw/day | Effects: Systemic |
| ethylbenzene | DNEL - Workers - Long term - Dermal | 180 mg/kg bw/day | Effects: Systemic |
| | DNEL - Workers - Long term - Inhalation | 77 mg/m³ | Effects: Systemic |
| hexamethylene-di-isocyanate | DNEL - Workers - Long term - Inhalation | 0.035 mg/m³ | Effects: Systemic |

**Predicted effect concentrations**

| Product/ingredient name | Compartment Detail | Value |
|---|---|---|
| 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 |
| ethylbenzene | 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 |
| | Soil | 2.68 mg/kg |
| hexamethylene-di-isocyanate | Fresh water | 77.4 µg/l |
| | Marine | 7.74 µg/l |
| | Fresh water sediment | 13.34 mg/kg |
| | Marine water sediment | 1.33 mg/kg |
| | Soil | 2.6 mg/kg |
| | Sewage Treatment Plant | 8.42 mg/l |

### 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 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.

Hand protection : Wear chemically 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.

## SECTION 8: Exposure controls/personal protection

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 (>0.3 mm), butyl rubber (>0.5 mm)
Short term exposure: neoprene rubber (>0.1 mm), natural rubber (latex) (>0.4 mm), polyvinyl chloride (PVC), nitrile rubber (>0.1 mm), butyl rubber (>0.3 mm)

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 : 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. 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. Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

**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: 40°C (104°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.

Vapour pressure :

| | Vapour Pressure at 20˚C | | | Vapour pressure at 50˚C | | |
|---|---|---|---|---|---|---|
| **Ingredient name** | **mm Hg** | **kPa** | **Method** | **mm Hg** | **kPa** | **Method** |
| xylene | 6.7 | 0.89 | | | | |

Vapour density : Not available.

Specific gravity : 1.07 g/cm³

Partition coefficient (LogKow) : Testing not relevant or not possible due to nature of the product.

Auto-ignition temperature :

| Ingredient name | °C | °F | Method |
|---|---|---|---|
| 2-methoxy-1-methylethyl acetate | 333 | 631.4 | DIN 51794 |

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 : Testing not relevant or not possible due to nature of the product.

Oxidising properties : Testing not relevant or not possible due to nature of the product.

### 9.2 Other information

Solvent(s) % by weight : Weighted average: 25 %

Water % by weight : Weighted average: 0 %

VOC content : 268.5 g/l

## SECTION 9: Physical and chemical properties

TOC Content : Weighted average: 195 g/l

Solvent Gas : Weighted average: 0.055 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.
Isocyanate containing products have characteristics that include producing acute irritation and/or sensitisation when breathing, subsequent asthmatic problems and lung contractions. Sensitised people can, as a result from this, show asthmatic symptoms with exposure to atmospheric concentrations far below the TLV. Repeated exposures will lead to permanent damage to the respiratory system.

**Acute toxicity**

| Product/ingredient name | Result | Dose / Exposure | Effects |
|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | Rat - Inhalation - LC50 Dusts and mists | 18500 mg/m³ [1 hours] | |
| | Rat - Inhalation - LC50 Dusts and mists | 1.5 mg/l [4 hours] | |
| 2-methoxy-1-methylethyl acetate | Rabbit - Dermal - LD50 | >5 g/kg | |
| | Rat - Oral - LD50 | 8532 mg/kg | |
| xylene | Rabbit - Dermal - LD50 | >4200 mg/kg | |
| | Rat - Oral - LD50 | 3523 mg/kg | |
| | Rat - Inhalation - LC50 Vapour | 6350 ppm [4 hours] | |
| | Rat - Inhalation - LC50 Gas. | 5000 ppm [4 hours] | |
| ethylbenzene | Rat - Oral - LD50 | 3500 mg/kg | Toxic effects: Liver - Other changes Kidney, Ureter, and Bladder - Other changes |
| | Rabbit - Dermal - LD50 | >5000 mg/kg | |
| hexamethylene-di-isocyanate | Rat - Oral - LD50 | 746 mg/kg | |
| | Rabbit - Dermal - LD50 | >7000 mg/kg | |
| | Rat - Inhalation - LC50 Dusts and mists | 124 mg/m³ [4 hours] | |
| | Rat - Inhalation - LC50 Vapour | 0.124 mg/l [4 hours] | |

**Acute toxicity estimates**

## SECTION 11: Toxicological information

| 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 95370 | | 12141.9 | 44368.6 | 43.1 | 2.3 |
| hexamethylene diisocyanate, oligomerisation product (biuret type) | | | | | 1.5 |
| 2-methoxy-1-methylethyl acetate | 8532 | | | | |
| xylene | 3523 | 1100 | 5000 | | |
| ethylbenzene | 3500 | | 4500 | 11 | |
| hexamethylene-di-isocyanate | 746 | | | 0.124 | |

**Irritation/Corrosion**

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | Rabbit - Skin - Mild irritant | | |
| | Rabbit - Eyes - Mild irritant | | |
| | Rabbit - Respiratory - Mild irritant | | |
| 2-methoxy-1-methylethyl acetate | Rabbit - Respiratory - Mild irritant | | |
| | Rabbit - Eyes - Mild irritant | | |
| xylene | Rabbit - Eyes - Severe irritant | Duration of treatment/ exposure: 24 hours | Amount/concentration applied: 5 milligrams |
| | Rabbit - Skin - Moderate irritant | Duration of treatment/ exposure: 24 hours | Amount/concentration applied: 500 milligrams |
| | Rabbit - Skin - Irritant | | |
| ethylbenzene | Rabbit - Skin - Mild irritant | Duration of treatment/ exposure: 24 hours | Amount/concentration applied: 15 milligrams |
| | Rabbit - Respiratory - Mild irritant | | |
| | Rabbit - Eyes - Mild irritant | | |
| hexamethylene-di-isocyanate | Rabbit - Skin - Severe irritant | | |
| | Rabbit - Eyes - Severe irritant | | |
| | Rabbit - Respiratory - Severe irritant | | |

**Sensitiser**

| Product/ingredient name | Species - Route of exposure | Result |
|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | Guinea pig - skin | Result: Sensitising |
| hexamethylene-di-isocyanate | Guinea pig - skin | Result: Sensitising |

**Mutagenic effects**

No known data avaliable in our database.

**Carcinogenicity**

No known data avaliable in our database.

**Reproductive toxicity**

No known data avaliable in our database.

**Specific target organ toxicity (single exposure)**

| Product/ingredient name | Category | Route of exposure | Target organs |
|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | Category 3 | | Respiratory tract irritation |
| 2-methoxy-1-methylethyl acetate | Category 3 | | 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**

## SECTION 11: Toxicological information

No known significant effects or critical hazards.

### 11.2 Information on other hazards

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 |
|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | Acute - EC50 | Algae | >100 mg/l [72 hours] |
| 2-methoxy-1-methylethyl acetate | Acute - LC50 | Fish | 100 - 180 mg/l [96 hours] |
| ethylbenzene | Chronic - NOEC - Fresh water | Algae - Green algae - *Pseudokirchneriella subcapitata* | <1000 µg/l [96 hours] |

### 12.2 Persistence and degradability

| Product/ingredient name | Test | Result |
|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | | 1% [28 days] - Not readily |
| 2-methoxy-1-methylethyl acetate | OECD Ready Biodegradability - Manometric Respirometry Test | 83% [28 days] - Readily |
| | OECD Ready Biodegradability - Manometric Respirometry Test | 90% [28 days] - Readily |
| xylene | | >60% [28 days] - Readily |
| | OECD Ready Biodegradability - Manometric Respirometry Test | 90 - 98% [28 days] - Readily |
| ethylbenzene | | >70% [28 days] - Readily |
| hexamethylene-di-isocyanate | | 42% [28 days] - Not readily |

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | | | Not readily |
| 2-methoxy-1-methylethyl acetate | | | Readily |
| xylene | | | Readily |
| ethylbenzene | | | Readily |
| hexamethylene-di-isocyanate | | | Not readily |

### 12.3 Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | 5.54 | - | High |
| 2-methoxy-1-methylethyl acetate | 1.2 | - | Low |
| xylene | 3.12 | 8.1 - 25.9 | Low |
| ethylbenzene | 3.6 | - | Low |
| hexamethylene-di-isocyanate | 0.02 | 57.63 | Low |

### 12.4 Mobility in soil

**Soil/water partition coefficient**

| Product/ingredient name | logKoc | Koc |
|---|---|---|
| 2-methoxy-1-methylethyl acetate | 0.36 | 2.31363 |
| xylene | 1.59 | 39 |
| ethylbenzene | 2.23 | 170.406 |
| hexamethylene-di-isocyanate | 1.38 | 23.8009 |

**Results of PMT and vPvM assessment**

| Product/ingredient name | PMT | P | M | T | vPvM | vP | vM |
|---|---|---|---|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | No | No | No | No | No | No | No |
| 2-methoxy-1-methylethyl acetate | No | No | No | No | No | No | No |
| xylene | No | No | No | No | No | No | No |
| ethylbenzene | No | No | No | No | No | No | No |
| hexamethylene-di-isocyanate | No | No | No | No | No | No | No |

Mobility : The product does not meet the criteria to be considered as a PMT or vPvM.

## SECTION 12: Ecological information

### 12.5 Results of PBT and vPvB assessment

**Regulation (EC) No. 1907/2006 [REACH]**

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|---|---|---|---|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | No | No | No | No | No | No | No |
| 2-methoxy-1-methylethyl acetate | No | No | No | No | No | No | No |
| xylene | No | No | No | No | No | No | No |
| ethylbenzene | No | No | No | No | No | No | No |
| hexamethylene-di-isocyanate | No | No | No | No | No | No | No |

**Regulation (EC) No. 1272/2008 [CLP]**

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|---|---|---|---|---|---|---|---|
| hexamethylene diisocyanate, oligomerisation product (biuret type) | No | No | No | No | No | No | No |
| 2-methoxy-1-methylethyl acetate | No | No | No | No | No | No | No |
| xylene | No | No | No | No | No | No | No |
| ethylbenzene | No | No | No | No | No | No | No |
| hexamethylene-di-isocyanate | No | No | No | No | No | No | No |

Conclusion/Summary : The product does not meet the criteria to be considered as a PBT or vPvB.

### 12.6 Endocrine disrupting properties

The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.6 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.

| | 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 | No. | **Tunnel code** (D/E) |
| **IMDG Class** | UN1263 | PAINT | 3  | III | No. | **Emergency schedules** F-E, S-E |
| **IATA Class** | UN1263 | PAINT | 3  | III | No. | - |

PG* : Packing group
Env.* : Environmental hazards

## SECTION 14: Transport information

### 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**

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

**As from August 24 2023 adequate training is required before industrial or professional use.**

**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. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| 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. |

Full text of classifications [CLP/GHS] :

| | |
|---|---|
| Acute Tox. 1 | ACUTE TOXICITY - Category 1 |
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Asp. Tox. 1 | ASPIRATION HAZARD - 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. 1 | RESPIRATORY SENSITISATION - Category 1 |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1 | SKIN SENSITISATION - Category 1 |
| STOT RE 2 | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 |
| STOT SE 3 | SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3 |

| Classification | Justification |
|---|---|
| FLAMMABLE LIQUIDS | On basis of test data |
| ACUTE TOXICITY (inhalation) | Calculation method |
| SKIN CORROSION/IRRITATION | Calculation method |
| SKIN SENSITISATION | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) | Calculation method |

## SECTION 16: Other information

**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 preformance 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

## Hempel's Curing Agent 95370

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, Substance-specific isocyanate

**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

**Range of application/Process conditions** : Assumes that activities are undertaken with appropriate and well maintained equipment by trained personnel operating under supervision.
As from August 24 2023 adequate training is required before industrial or professional 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 chemically 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 chemically 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 chemically 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 | Use a properly fitted, air-purifying or air-fed respirator. EN 14594 with an assigned protection factor of at least 20. | Use eye protection according to EN 166. | Wear chemically 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 chemically 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 chemically resistant gloves (tested to EN374) in combination with 'basic' employee training. |

See section 8 of this Safety Data Sheet for specifications.