Safety Data Sheet Hempel's Curing Agent 95373



1.4 Emergency telephone number

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

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

1.1 Product identifier

Product name :	Hempel's Curing Agent 95373
Product identity :	9537300000, 00138838
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.
Identified uses :	Industrial applications, Professional applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details :	Company details : HEMPEL A/S Lundtoftegårdsvej 91	Emergency telephone number (with hours of operation)		
	DK-2800 Kgs. Lyngby Denmark Tel.: + 45 45 93 38 00 hempel@hempel.com	+45 45 93 38 00 (08.00 - 17.00) See section 4 First aid measures.		
Date of issue :	13 November 2023			
Date of previous issue :	1 April 2023.			

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition :

Mixture

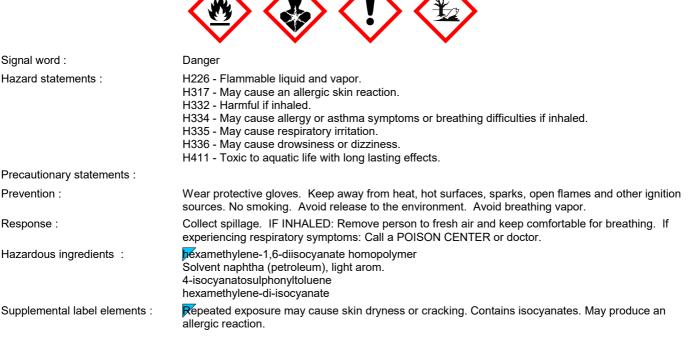
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226FLAMMABLE LIQUIDSAcute Tox. 4, H332ACUTE TOXICITY (inhalation)Resp. Sens. 1, H334RESPIRATORY SENSITIZATIONSkin Sens. 1, H317SKIN SENSITIZATIONSTOT SE 3, H335SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation)STOT SE 3, H336SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects)Aquatic Chronic 2, H411AQUATIC HAZARD (LONG-TERM)

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

2.2 Label elements

Hazard pictograms :





SECTION 2: Hazards identification

Special packaging requirements

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

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 None known. in classification :

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product/ingredient name	Identifiers	%	Regulation (EC)	lo. 1272/2008 [CLP]	Туре
pexamethylene- 1,6-diisocyanate homopolymer	REACH #: 01-2119485796-17 EC: 500-060-2 CAS: 28182-81-2	≥50 - ≤75	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335	ATE [Inhalation (dusts and mists)] = 1.5 mg/l	[1]
Solvent naphtha (petroleum), light arom.	REACH #: 01-2119455851-35 EC: 918-668-5 CAS: 128601-23-0	≥25 - ≤50	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[1] [2]
n-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1	≥3 - ≤5	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	-	[1] [2]
4-isocyanatosulphonyltoluene	REACH #: 01-2119980050-47 EC: 223-810-8 CAS: 4083-64-1 Index: 615-012-00-7	≥1 - ≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 STOT SE 3, H335 EUH014	Skin Irrit. 2, H315: C ≥ 5% Eye Irrit. 2, H319: C ≥ 5% STOT SE 3, H335: C ≥ 5%	[1]
hexamethylene-di-isocyanate	REACH #: 01-2119457571-37 EC: 212-485-8 CAS: 822-06-0 Index: 615-011-00-1	<0.1	Acute Tox. 4, H302 Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335	ATE [Oral] = 746 mg/kg ATE [Inhalation (vapours)] = 0.124 mg/l Resp. Sens. 1, H334: C ≥ 0.5% Skin Sens. 1, H317: C ≥ 0.5%	[1] [2]
			See Section 16 for the full text above.	of the H statements declared	

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.

Туре

[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 :	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.

Safety Data Sheet Hempel's Curing Agent 95373



SECTION 4: First aid measures

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 ar	nd effects, both acute and delayed
Potential acute health effects	
Eye contact :	No known significant effects or critical hazards.
Inhalation :	Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact :	Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
Ingestion :	Can cause central nervous system (CNS) depression.
Over-exposure signs/symptoms	
Eye contact :	No specific data.
Inhalation :	Adverse symptoms may include the following: respiratory tract irritation coughing wheezing and breathing difficulties asthma nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact :	Adverse symptoms may include the following: irritation redness dryness cracking
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

Specific treatments :

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO ₂ , powders, water spray.
	Not to be used: waterjet.

or inhaled

No specific treatment.

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 sulfur 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 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. May be harmful to the environment if released in large quantities.

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 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

Product/ingredient name	Exposure limit values
Solvent naphtha (petroleum), light arom.	EU OEL (Europe). TWA: 120 mg/m³ 8 hours. Form: Tentativ TWA: 25 ppm 8 hours. Form: Tentativ
n-butyl acetate	EU OEL (Europe, 1/2022). STEL: 150 ppm 15 minutes. STEL: 723 mg/m ³ 15 minutes. TWA: 241 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
hexamethylene-di-isocyanate	EU OEL (Europe, 2/2010). (ACGIH) TWA: 0.03 mg/m ³ 8 hours. (ACGIH) TWA: 0.01 ppm 8 hours.

Recommended monitoring procedures



SECTION 8: Exposure controls/personal protection

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 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	Туре	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
n-butyl acetate	DNEL	Long term Inhalation	300 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	11 mg/kg bw/day	Workers	Systemic
hexamethylene-di-isocyanate	DNEL	Long term Inhalation	0.035 mg/m ³	Workers	Systemic

Predicted effect concentrations

Product/ingredient name	Compartment Detail	Value	Method Detail
hexamethylene-1,6-diisocyanate homopolymer	Fresh water	0.127 mg/l	-
	Marine water	0.0127 mg/l	-
	Fresh water sediment	266700 mg/kg dwt	-
	Marine water sediment	26670 mg/kg dwt	-
	Soil	53182 mg/kg dwt	-
	Sewage Treatment Plant	88 mg/l	-
n-butyl acetate	Fresh water	0.18 mg/l	-
	Marine	0.018 mg/l	-
	Fresh water sediment	0.981 mg/kg	-
	Marine water sediment	0.0981 mg/kg	-
	Soil	0.0903 mg/kg	-
	Sewage Treatment Plant	35.6 mg/l	-
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: safety glasses with side-shields.
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.
	Fince 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®, 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.



SECTION 8: Exposure controls/personal protection

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.
Color :	Transparent
Odor :	Solvent-like
pH :	Testing not relevant or not possible due to nature of the product.
Melting point/freezing point :	-39.85°C This is based on data for the following ingredient: hexamethylene-1,6-diisocyanate homopolymer
Boiling point/boiling range :	Testing not relevant or not possible due to nature of the product.
Flash point :	Closed cup: 41°C (105.8°F)
Evaporation rate :	Testing not relevant or not possible due to nature of the product.
Flammability :	Frammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and oxidizing materials.
Lower and upper explosive (flammable) limits :	<mark>7</mark> .4 - 7.6 vol %
Vapor pressure :	0 kPa This is based on data for the following ingredient: hexamethylene-1,6-diisocyanate homopolymer
Vapor density :	Testing not relevant or not possible due to nature of the product.
Specific gravity :	1.03 g/cm ³
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 :	Slightly explosive in the presence of the following materials or conditions: open flames, sparks and static discharge.
Oxidizing properties :	Testing not relevant or not possible due to nature of the product.
9.2 Other information	
Solvent(s) % by weight :	Weighted average: 39 %
Water % by weight :	Weighted average: 0 %
VOC content :	40 6.7 g/l
TOC Content :	₩eighted average: 356 g/l

SECTION 10: Stability and reactivity

10.1 Reactivity

Solvent Gas :

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

Weighted average: 0.086 m³/l

10.2 Chemical stability

The product is stable.



SECTION 10: Stability and reactivity

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.

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 sulfur 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	Species	Dose	Exposure
pexamethylene-1,6-diisocyanate homopolymer	LC50 Inhalation Dusts and mists	Rat	18500 mg/m ³	1 hours
	LC50 Inhalation Dusts and mists	Rat	1.5 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2500 mg/kg	-
Solvent naphtha (petroleum), light arom.	LC50 Inhalation Vapor	Rat	6193 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3160 mg/kg	-
	LD50 Oral	Rat	3492 mg/kg	-
n-butyl acetate	LC50 Inhalation Vapor	Rat	>21 mg/l	4 hours
5	LD50 Dermal	Rabbit	>14112 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
4-isocyanatosulphonyltoluene	LC50 Inhalation Dusts and mists	Rat	>640 mg/l	1 hours
, i ,	LD50 Oral	Rat	2234 mg/kg	-
hexamethylene-di-isocyanate	LC50 Inhalation Dusts and mists	Rat	124 mg/m ³	4 hours
, ,	LC50 Inhalation Vapor	Rat	0.124 mg/l	4 hours
	LD50 Dermal	Rabbit	>7000 mg/kg	-
	LD50 Oral	Rat	746 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
Fempel's Curing Agent 95373 hexamethylene-1,6-diisocyanate homopolymer Solvent naphtha (petroleum), light arom. n-butyl acetate 4-isocyanatosulphonyltoluene hexamethylene-di-isocyanate	3492 10768 2234 746	3160		0.124	2.8 1.5

Irritation/Corrosion



SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure
hexamethylene-1,6-diisocyanate homopolymer	Eyes - Mild irritant	Rabbit	-	-
	Respiratory - Mild irritant	Rabbit	-	-
	Skin - Mild irritant	Rabbit	-	-
Solvent naphtha (petroleum), light arom.	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters
	Respiratory - Mild irritant	Rabbit	-	_
	Skin - Moderate irritant	Rabbit	_	-
n-butyl acetate	Eyes - Mild irritant	Rabbit	_	-
······	Respiratory - Mild irritant	Rabbit	_	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
4-isocyanatosulphonyltoluene	Eyes - Moderate irritant	Rabbit	-	100 microliters
, i ,	Skin - Mild irritant	Rabbit	-	24 hours 500 microliters
hexamethylene-di-isocyanate	Eyes - Severe irritant	Rabbit	-	-
,,	Respiratory - Severe irritant	Rabbit	-	-
	Skin - Severe irritant	Rabbit	-	-

Sensitizer

Product/ingredient name	Route of exposure	Species	Result
pexamethylene-1,6-diisocyanate homopolymer	skin	Guinea pig	Sensitizing
hexamethylene-di-isocyanate	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
pexamethylene-1,6-diisocyanate homopolymer	Category 3		Respiratory tract irritation
Solvent naphtha (petroleum), light arom.	Category 3		Respiratory tract irritation
	Category 3		Narcotic effects
n-butyl acetate	Category 3		Narcotic effects
4-isocyanatosulphonyltoluene	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
No known data avaliable in our database.			

Aspiration hazard

Product/ingredien	name	Result
Solvent naphtha (petroleum), light a	rom. AS	PIRATION HAZARD - Category 1

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

No known significant effects or critical hazards.

Sensitization :

Contains hexamethylene-1,6-diisocyanate homopolymer, 4-isocyanatosulphonyltoluene. May produce an allergic reaction.

11.2 Information on other hazards

Endocrine disrupting properties :	See Section 15 for details.
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
Solvent naphtha (petroleum), light	Acute EC50 2.6 mg/l	Algae - Pseudokirchneriella subcapitata	96 hours
arom.		(green algae)	
	Acute EC50 3.2 mg/l	Daphnia	48 hours
	Acute LC50 9.22 mg/l	Fish - Oncorhynchus mykiss (rainbow	96 hours
		trout)	
n-butyl acetate	Acute EC50 648 mg/l	Algae	72 hours
-	Acute EC50 44 mg/l	Daphnia	48 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
pexamethylene-1,6-diisocyanate homopolymer	-	1 % - Not readily - 28 days	-	-
Solvent naphtha (petroleum), light arom.	OECD 301F Ready Biodegradability - Manometric Respirometry Test	78 % - Readily - 28 days	-	-
	-	>70 % - Readily - 28 days >60 % - Readily - 28 days	-	-
n-butyl acetate	- OECD 301D Ready Biodegradability - Closed Bottle Test	90 % - Readily - 28 days 80 % - Readily - 5 days	-	-
hexamethylene-di-isocyanate	-	42 % - Not readily - 28 days	-	-
Product/ingredient name	Aquatic half-life	Photolysis	Biodeg	radability
pexamethylene-1,6-diisocyanate homopolymer	-	-	Not readily	
Solvent naphtha (petroleum), light arom.	-	-	Readily	
n-butyl acetate hexamethylene-di-isocyanate	-	-	Readily Not readily	

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
pexamethylene-1,6-diisocyanate homopolymer	5.54	367.7	low
Solvent naphtha (petroleum), light arom.	-	10 - 2500	high
n-butyl acetate	2.3	3.1	low
hexamethylene-di-isocyanate	0.02	57.63	low

12.4 Mobility in soil

Soil/water partition coefficient	No known data avaliable in our database.
(Koc) :	
Mobility :	No known data avaliable in our database.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	Р	В	Т	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

See Section 15 for details.

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.

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		III	Yes.	The environmentally hazardous substance mark is not required when transported in sizes of ≤ 5 L or ≤ 5 kg. Tunnel code (D/E)
IMDG Class	UN1263	PAINT. (Solvent naphtha (petroleum), light arom.)		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

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

Safety Data Sheet Hempel's Curing Agent 95373



SECTION 15: Regulatory information

15.2 Chemical Safety Assessment



SECTION 16: Other information	l
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Abbreviations and acronyms :	EUH statement = CL RRN = REACH Regi DNEL = Derived No	, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] P-specific Hazard statement stration Number
Full text of abbreviated H statements :	H226 H302 H304 H315 H317 H319 H330 H332 H334 H335 H336 H411 EUH014 EUH014	Flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Fatal if inhaled. Harmful if inhaled. Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects. Reacts violently with water. Repeated exposure may cause skin dryness or cracking.
Full text of classifications [CLP/GHS] :	Acute Tox. 1 Acute Tox. 4 Aquatic Chronic 2 Asp. Tox. 1 Eye Irrit. 2 Flam. Liq. 3 Resp. Sens. 1 Skin Irrit. 2 Skin Sens. 1 STOT SE 3	ACUTE TOXICITY - Category 1 ACUTE TOXICITY - Category 4 AQUATIC HAZARD (LONG-TERM) - Category 2 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 3 RESPIRATORY SENSITIZATION - Category 1 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1 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
ACUTE TOXICITY (inhalation) RESPIRATORY SENSITIZATION SKIN SENSITIZATION SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects)	On basis of test data Calculation method Calculation method Calculation method 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 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.



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 spray painting by professionals with efficient ventilation such as spray booth or local exhaust ventilation

This safe use information is linked to	: Professional spray painting, near-industrial setting - Level I HMP I/PW 01a	
Sector(s) of use	: Industrial uses - Professional uses	
Product category(ies)	: Coatings and paints, thinners, paint removers	
Operational conditions Place of use	: Indoor use	
Range of application/Process	: Assumes a good standard of occupational hygiene and safety management has been implemented.	

Risk management measures (RMM)

conditions

Contributing	Process	Maximum duration	Ventilation		Respiratory	Eye	Hands
activity	category (ies)	utration	Type and air chain chain chain bear hour	Type and air changes per hour			
Preparation of material for application	PROC05	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Loading of application equipment and handling of coated parts before curing	PROC08b	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Industrial application of coatings by spraying	PROC07	More than 4 hours	Local exhaust ventilation	Refer to relevant technical standards	Wear a respirator conforming to EN140 with an assigned protection factor of at least 10.	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Film formation - force drying, stoving and other technologies	PROC04	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	None	None
Cleaning	PROC05	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Waste management	PROC08b	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.

See chapter 8 of this Safety Data Sheet for specifications.





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

Outdoor spray painting by professionals for specialist applications, with respiratory protection

This safe use information is linked to	Professional spray painting, near-industrial setting - Level II HMP I/PW 05b	
Sector(s) of use	Industrial uses - Professional uses	
Product category(ies)	Coatings and paints, thinners, paint removers	
Operational conditions		
Place of use	Outdoor use	
Range of application/Process	Assumes a good standard of occupational hygiene and safety management has been implem	nented.

Risk management measures (RMM)

conditions

Contributing activity	Process category	Maximum duration	Ventilation		Respiratory	Eye	Hands
activity	(ies)	uuration	Type and air changes per hour				
Preparation of material for application	PROC05	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Loading of application equipment and handling of coated parts before curing	PROC08b	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Industrial application of coatings by spraying	PROC07	More than 4 hours	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 suitable gloves tested to EN374.
Film formation - force drying, stoving and other technologies	PROC04	More than 4 hours	Outdoors	3 - 5	None	None	None
Cleaning	PROC05	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Waste management	PROC08b	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.

See chapter 8 of this Safety Data Sheet for specifications.





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General description of the process covered

Indoor spray painting by professionals for specialist applications, with good general room ventilation plus respiratory protection

This safe use information is linked to	: Professional spray painting, indoor (Level III) HMP PW 03c
Sector(s) of use	: Professional uses
Product category(ies)	: Coatings and paints, thinners, paint removers

Operational conditions

Place of use : Indoor use

Risk management measures (RMM)

Contributing	Process	Maximum	Ventilation Type and air changes per hour		Respiratory	Eye	Hands
activity	category (ies)	duration					
Preparation of material for application	PROC05	More than 4 hours	Good general room ventilation	3 - 5	None	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	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	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	3 - 5	None	None	None
Cleaning	PROC05	More than 4 hours	Good general room ventilation	3 - 5	None	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	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.





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General description of the process covered

Outdoor painting by professionals by dipping or with brush, roller, putty knife etc.

This safe use information is linked to	Professional low-energy painting, near-industrial setting - Level I HMP I/PW 06a	
Sector(s) of use	Industrial uses - Professional uses	
Product category(ies)	Coatings and paints, thinners, paint removers	
Operational conditions		
Place of use	Outdoor use	
Range of application/Process	Assumes a good standard of occupational hygiene and safety management has been implem	nented.

Risk management measures (RMM)

conditions

Contributing	Process	Maximum	Ventilati	ion	Respiratory	Eye	Hands
activity	category (ies)	duration	Type and air changes per hour				
Preparation of material for application	PROC05	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Loading of application equipment and handling of coated parts before curing	PROC08b	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Industrial application of coatings by other than spraying	PROC10	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Film formation - force drying, stoving and other technologies	PROC04	More than 4 hours	Outdoors	3 - 5	None	None	None
Cleaning	PROC05	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Waste management	PROC08b	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.

See chapter 8 of this Safety Data Sheet for specifications.





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General description of the process covered

Indoor painting by professionals with brush or roller, with good general room ventilation (open doors/windows)

This safe use information is linked to	:	Professional painting, indoor brush/roller - Level I CEPE / HMP PW 04a
Sector(s) of use Product category(ies)		Professional uses Coatings and paints, thinners, paint removers
	•	

Operational conditions

Place of use : Indoor use

Risk management measures (RMM)

Contributing	Process	Maximum	Ventilation		Respiratory	Eye	Hands
activity	category (ies)	duration	Type and air changes per hour				
Preparation of material for application	PROC05	More than 4 hours	Good general room ventilation	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Loading of application equipment and handling of coated parts before curing	PROC08a	More than 4 hours	Good general room ventilation	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Professional application of coatings by brush or roller	PROC10	More than 4 hours	Good general room ventilation	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Film formation - force drying, stoving and other technologies	PROC04	More than 4 hours	Good general room ventilation	3 - 5	None	None	None
Cleaning	PROC05	More than 4 hours	Good general room ventilation	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Waste management	PROC08a	More than 4 hours	Good general room ventilation	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.

See chapter 8 of this Safety Data Sheet for specifications.





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General description of the process covered

Indoor painting by professionals by	dipping or with brush, roller, putty knife etc. with enhanced ventilation or local exhaust ventilation (LEV)
This safe use information is	 Destruction allow an emission in dustrial actions. Level 1

This safe use information is linked to	: Professional low-energy painting, near-industrial setting - Level I HMP I/PW 02a	
Sector(s) of use	: Industrial uses - Professional uses	
Product category(ies)	: Coatings and paints, thinners, paint removers	
Operational conditions		
Place of use	: Indoor use	
Range of application/Process	: Assumes a good standard of occupational hygiene and safety management has been implemented	əd.

Risk management measures (RMM)

conditions

Contributing activity	Process category	Maximum duration	Ventilation		Respiratory	Еуе	Hands
	(ies)	uuration	Type and air changes per hour				
Preparation of material for application	PROC05	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Loading of application equipment and handling of coated parts before curing	PROC08b	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Industrial application of coatings by other than spraying	PROC10	More than 4 hours	Local exhaust ventilation	Refer to relevant technical standards	Wear a respirator conforming to EN140 with an assigned protection factor of at least 10.	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Film formation - force drying, stoving and other technologies	PROC04	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	None	None
Cleaning	PROC05	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Waste management	PROC08b	More than 4 hours	Enhanced (mechanical) room ventilation	5 - 10	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.

See chapter 8 of this Safety Data Sheet for specifications.





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General description of the process covered

Outdoor spray painting by professionals for specialist applications, with respiratory protection

This safe use information is linked to	:	Professional spray painting, outdoor (Level III) CEPE / HMP PW 05c
Product category(ies)	:	Coatings and paints, thinners, paint removers

Operational conditions

Place of use : Outdoor use

Risk management measures (RMM)

Contributing activity	Process category	Maximum duration	Ventilation Type and air changes per hour		Respiratory	Eye	Hands
	(ies)	duration					
Preparation of material for application	PROC05	More than 4 hours	Outdoors	3 - 5	None	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	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	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	Outdoors	3 - 5	None	None	None
Cleaning	PROC05	More than 4 hours	Outdoors	3 - 5	None	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	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.





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

Outdoor painting by professionals by dipping or with brush, roller, putty knife etc.

Professional painting, outdoor brush/roller - Level I CEPE / HMP PW 06a	nis :	This safe use information is linked to
Professional uses Coatings and paints, thinners, paint removers		Sector(s) of use Product category(ies)

Operational conditions

Place of use : Outdoor use

Risk management measures (RMM)

Contributing	Process	Maximum	Ventilation		Respiratory	Eye	Hands
activity	category (ies)	duration	Type and air changes per hour				
Preparation of material for application	PROC05	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Loading of application equipment and handling of coated parts before curing	PROC08a	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Professional application of coatings by brush or roller	PROC10	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Film formation - force drying, stoving and other technologies	PROC04	More than 4 hours	Outdoors	3 - 5	None	None	None
Cleaning	PROC05	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.
Waste management	PROC08a	More than 4 hours	Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear suitable gloves tested to EN374.

See chapter 8 of this Safety Data Sheet for specifications.

