

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 95093
Product identity : 9509300000
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)

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

Date of issue : 18 August 2022
Date of previous issue : 17 December 2021.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

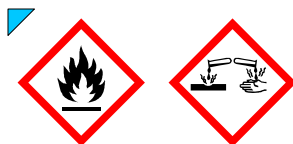
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226 FLAMMABLE LIQUIDS
Skin Corr. 1C, H314 SKIN CORROSION/IRRITATION
Eye Dam. 1, H318 SERIOUS EYE DAMAGE/EYE IRRITATION

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.

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 : Butan-1-ol
2,4,6-tris(dimethylaminomethyl)phenol

Supplemental label elements : Contains 3-aminopropyldimethylamine, 3,6-diazaoctanethylenediamin, 3-aminopropyldiethylamine and ethylenediamine. May produce an allergic reaction.

Special packaging requirements

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

SECTION 2: Hazards identification

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
Butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≥10 - <20	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]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥5 - ≤10	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	[1] [2]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1 - ≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Skin Corr. 1C, H314	[1] [2]
bis[(dimethylamino)methyl] phenol	EC: 275-162-0 CAS: 71074-89-0	≥1 - ≤3	Eye Dam. 1, H318	[1]
3-aminopropyldimethylamine	REACH #: 01-2119486842-27 EC: 203-680-9 CAS: 109-55-7	<1	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT SE 3, H335	[1]
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]
3-aminopropyldiethylamine	REACH #: 01-2119965402-39 EC: 203-236-4 CAS: 104-78-9 Index: 612-062-00-1	<1	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT SE 3, H335	[1]
ethylenediamine	REACH #: 01-2119480383-37 EC: 203-468-6 CAS: 107-15-3	≤0.3	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 See Section 16 for the full text of the H statements declared above.	[1] [2] [5]

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

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.
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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
2,4,6-tris(dimethylaminomethyl)phenol	DNEL	Long term Inhalation	0.53 mg/m ³	Workers	Systemic
xylene	DNEL	Long term Dermal	0.15 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	77 mg/m ³	Workers	Systemic
ethylbenzene	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	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
3-aminopropyldiethylamine	DNEL	Long term Dermal	3.5 mg/kg	Workers	Systemic
	DNEL	Long term Inhalation	24.7 mg/m ³	Workers	Systemic

Predicted effect concentrations

Product/ingredient name	Compartment Detail	Value	Method Detail
2,4,6-tris(dimethylaminomethyl)phenol	Fresh water	0.084 mg/l	-
	Marine water	0.0084 mg/l	-
	Sewage Treatment Plant	0.2 mg/l	-
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	-
3,6-diazaoctanethylenediamin	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	-
3-aminopropyldiethylamine	Fresh water	0.03 mg/l	-
	Marine water	0.003 mg/l	-
	Fresh water sediment	0.42 mg/kg dwt	-
	Marine water sediment	0.042 mg/kg dwt	-
	Soil	0.066 mg/kg dwt	-
	Sewage Treatment Plant	10 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.

SECTION 8: Exposure controls/personal protection

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® May be used: nitrile rubber, neoprene rubber, butyl rubber 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: 27°C (80.6°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 - 11.3 vol %
Vapour pressure :	0.01 kPa This is based on data for the following ingredient: phenalkamine (polymer of cashew nut shell liquid, formaldehyde and ethylene diamine) adduct
Vapour density :	Testing not relevant or not possible due to nature of the product.
Specific gravity :	0.95 g/cm ³
Solubility(ies) :	Partially soluble in the following materials: cold water and hot water.
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Lowest known value: 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.

SECTION 9: Physical and chemical properties

9.2 Other information

Solvent(s) % by weight :	Weighted average: 21 %
Water % by weight :	Weighted average: 0 %
VOC content :	201.2 g/l
TOC Content :	Weighted average: 142 g/l
Solvent Gas :	Weighted average: 0.056 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

Product/ingredient name	Result	Species	Dose	Exposure
Butan-1-ol	LC50 Inhalation Vapour	Rat	24000 mg/m³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
2,4,6-tris(dimethylaminomethyl) phenol	LD50 Dermal	Rabbit	1465 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
	LD50 Oral	Rat	2169 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapour	Rat	6350 ppm	4 hours
	LD50 Dermal	Rabbit	>4200 mg/kg	-
	LD50 Oral	Rat	3523 mg/kg	-
ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
3-aminopropyldimethylamine	LD50 Dermal	Rabbit	490 mg/kg	-
	LD50 Oral	Rat	1870 mg/kg	-
3,6-diazaoctanethylenediamin	LD50 Dermal	Rabbit	550 mg/kg	-
	LD50 Oral	Rat	1716 mg/kg	-
3-aminopropyldiethylamine	LD50 Dermal	Rabbit	525 mg/kg	-

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ethylenediamine	LD50 Oral	Rat	830 mg/kg	-
	LC50 Inhalation Vapour	Rat	14.7 mg/l	4 hours
	LD50 Dermal	Rabbit	730 mg/kg	-
	LD50 Oral	Rat	866 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 95093	4941.1	11580.2	74466.4	741.3	
butan-1-ol	790	3400		24	
2,4,6-tris(dimethylaminomethyl)phenol	1200				
xylene	3523	1100	5000		
ethylbenzene	3500			11	
3-aminopropyldimethylamine	1870	1100			
3,6-diazaoctanethylenediamin		550			
3-aminopropyldiethylamine	830	525			
ethylenediamine	866	730		14.7	

Irritation/Corrosion

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

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		Respiratory tract irritation
3-aminopropyldiethylamine	Category 3		Narcotic effects
	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

SECTION 11: Toxicological information

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 3-aminopropyldimethylamine, 3,6-diazaoctanethylenediamin, 3-aminopropyldiethylamine, ethylenediamine. 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
Butan-1-ol	Acute EC50 1328 mg/l	Daphnia	96 hours
2,4,6-tris(dimethylaminomethyl) phenol	Acute LC50 1.376 mg/l	Fish	96 hours
	Acute EC50 84 mg/l	Algae	72 hours
ethylbenzene	Acute LC50 175 mg/l	Fish	96 hours
3,6-diazaoctanethylenediamin	Chronic NOEC <1000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 20 mg/l	Algae	72 hours
ethylenediamine	Acute EC50 31.1 mg/l	Daphnia	48 hours
	Acute LC50 330 mg/l	Fish	96 hours
	Acute EC50 16.7 mg/l	Daphnia	48 hours
	Chronic NOEC 160 µg/l Fresh water	Daphnia - Daphnia magna	21 days

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Butan-1-ol	OECD 301D Ready	92 % - 20 days	-	-
2,4,6-tris(dimethylaminomethyl) phenol	Biodegradability - Closed Bottle Test	4 % - Not readily - 28 days	-	-
xylylene	OECD 301D 301D Ready	90 - 98 % - Readily - 28 days	-	-
	Biodegradability - Closed Bottle Test			
	OECD 301F Ready			
	Biodegradability - Manometric			
	Respirometry Test			
ethylbenzene	-	>60 % - Readily - 28 days	-	-
3-aminopropyldiethylamine	-	>70 % - Readily - 28 days	-	-
	OECD 301A 301A Ready	90 % - Readily - 28 days	-	-
	Biodegradability - DOC Die-Away Test			

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Butan-1-ol	-	-	Readily
2,4,6-tris(dimethylaminomethyl) phenol	-	-	Not readily
xylylene	-	-	Readily
ethylbenzene	-	-	Readily
3-aminopropyldiethylamine	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Butan-1-ol	1	3.16	low
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	low
xylylene	3.12	8.1 - 25.9	low
ethylbenzene	3.6	-	low
3-aminopropyldimethylamine	-0.352	-	low
3,6-diazaoctanethylenediamin	-1.66 - -1.4	-	low
3-aminopropyldiethylamine	0.3	6.3	low
ethylenediamine	-7.02	-	low

SECTION 12: Ecological information

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.

	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, FLAMMABLE, CORROSIVE	3 8  	III	No.	Tunnel code (D/E)
IMDG Class	UN3469	PAINT, FLAMMABLE, CORROSIVE	3 8  	III	No.	Emergency schedules F-E, S-C
IATA Class	UN3469	PAINT, 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.
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
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	On basis of test data Calculation method 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 performance or suitability for particular applications.

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

Safe Use of Mixture Information

Hempel's Curing Agent 95093



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.

