

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830 - 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 98410
Product identity : 9841000000
Product type : polyamide adduct 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 : 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 April 2016
Date of previous issue : 12 August 2015.

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 - Category 3
Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B
Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1
STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
STOT SE 3, H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger
Hazard statements : H226 - Flammable liquid and vapour.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.
H336 - May cause drowsiness or dizziness.

Precautionary statements :

Prevention : Do not breathe gas, vapour or spray. Wear protective gloves/protective clothing/eye protection/face protection. In case of inadequate ventilation wear respiratory protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN (or hair): Rinse skin with water or shower. Take off immediately all contaminated clothing. Immediately call a POISON CENTER or doctor.

Storage : Keep cool.

SECTION 2: Hazards identification

Hazardous ingredients : **Butan-1-ol**
 2,4,6-tris(dimethylaminomethyl)phenol
 N,N-diethyl-1,3-diaminopropane
 1,2-diaminoethane

Special packaging requirements

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

Tactile warning of danger : Not applicable.

2.3 Other hazards

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 - ≤25	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]
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤20	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	C [1] [2]
2,4,6-tris(dimethylaminomethyl)phenol	REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2	≥5 - ≤10	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	- [1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1 - ≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304	- [1] [2]
N,N-diethyl-1,3-diaminopropane	REACH #: 01-2119965402-39 EC: 203-236-4 CAS: 104-78-9 Index: 612-062-00-1	≥1 - ≤3	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]
bis[(dimethylamino)methyl]phenol	EC: 275-162-0 CAS: 71074-89-0	≥1 - ≤3	Skin Corr. 1B, H314 Eye Dam. 1, H318	- [1]
1,2-diaminoethane	EC: 203-468-6 CAS: 107-15-3 Index: 612-006-00-6	<1	Flam. Liq. 3, H226 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1, H317	- [1] [2]

See Section 16 for the full text of the H statements declared above.

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

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. In case of burns flush with water until the pain ceases. While flushing remove clothing from the affected area unless it is burnt into the skin. If hospital treatment is necessary flushing must continue during transfer and until the hospital staff takes over the treatment.
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 :	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
Skin contact :	Causes severe burns. May cause an allergic skin reaction.
Ingestion :	Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain watering redness
Inhalation :	Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact :	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion :	Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician :	If gasses have been inhaled, from the decomposition of the product, symptoms may be delayed. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments :	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

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

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), 12/2011). Absorbed through skin. STEL: 154 mg/m ³ 15 minutes.
xylene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 441 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 552 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 441 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
1,2-diaminoethane	EU OEL (Europe, 2/2010). Absorbed through skin. (ACGIH) TWA: 10 ppm 8 hours.

Recommended monitoring procedures

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

Derived effect levels

No DNELs/DMELs available.

Predicted effect concentrations

No PNECs available

8.2 Exposure controls

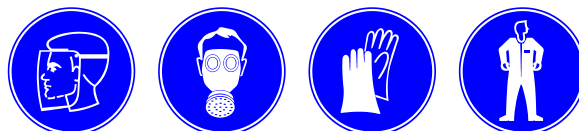
Appropriate engineering controls

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

Individual protection measures

General :

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



Hygiene measures :

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

Eye/face protection :

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Hand protection :

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

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 / 4H gloves, polyvinyl alcohol (PVA), Viton®
May be used: nitrile rubber, neoprene rubber, butyl rubber
Short term exposure: 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.
Chemical-resistant apron.

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.

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: 34°C (93.2°F)

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

Flammability : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

Lower and upper explosive (flammable) limits : 0.8 - 11.3 vol %

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

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

Relative density : 0.927 g/cm³

Solubility(ies) : Insoluble 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 : Highly explosive in the presence of the following materials or conditions: heat.
Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge.

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

9.2 Other information

Solvent(s) % by weight : Weighted average: 37 %

Water % by weight : Weighted average: 0 %

VOC content : 367.4 g/l

TOC Content : Weighted average: 254 g/l

Solvent Gas : Weighted average: 0.105 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: oxidizing 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 toxicological effects

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.

Inhalation of a corrosive substance may result in health effects such as stinging, coughing and in extreme cases, dyspnoea or loss of consciousness with a risk of lung damage, possibly lung oedema. Cauterization of skin and mucous membrane. If splashed in the eyes, the liquid may cause irreversible damage. Accidental swallowing may cause stinging and cauterization to mouth, oesophagus and stomach. Symptoms and signs include bloody vomiting, chock and loss of consciousness.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Butan-1-ol	LC50 Inhalation Vapour	Rat	24000 mg/m ³	4 hours
	LD50 Dermal	Rabbit	3400 mg/kg	-
	LD50 Oral	Rat	790 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapour	Rat	6350 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
2,4,6-tris(dimethylaminomethyl) phenol	LD50 Dermal	Rat	1280 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
ethylbenzene	LD50 Oral	Rat	2169 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
N,N-diethyl-1,3-diaminopropane	LD50 Dermal	Rabbit	525 mg/kg	-
	LD50 Oral	Rat	830 mg/kg	-
1,2-diaminoethane	LD50 Dermal	Rabbit	730 mg/kg	-
	LD50 Oral	Rat	500 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	3271.8 mg/kg
Dermal	7618.2 mg/kg
Inhalation (gases)	39836.1 ppm
Inhalation (vapours)	89.39 mg/l

Irritation/Corrosion

SECTION 11: Toxicological information

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
xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
2,4,6-tris(dimethylaminomethyl) phenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams
ethylbenzene	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams
	Respiratory - Mild irritant	Rabbit	-	-
	Eyes - Mild irritant	Rabbit	-	-
N,N-diethyl-1,3-diaminopropane	Skin - Severe irritant	Rabbit	-	-
	Eyes - Severe irritant	Rabbit	-	-
1,2-diaminoethane	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
N,N-diethyl-1,3-diaminopropane	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	Not applicable.	Respiratory tract irritation and Narcotic effects
N,N-diethyl-1,3-diaminopropane	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	Not determined	hearing organs

Aspiration hazard

Product/ingredient name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

Sensitisation : Contains N,N-diethyl-1,3-diaminopropane, 1,2-diaminoethane. May produce an allergic reaction.

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.

SECTION 12: Ecological information

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
1,2-diaminoethane	Chronic NOEC <1000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 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 Biodegradability - Closed Bottle Test	92 % - 20 days	-	-
xylene	-	>60 % - Readily - 28 days	-	-
2,4,6-tris(dimethylaminomethyl)phenol	OECD 301D 301D Ready Biodegradability - Closed Bottle Test	4 % - Not readily - 28 days	-	-
ethylbenzene	-	>70 % - Readily - 28 days	-	-
N,N-diethyl-1,3-diaminopropane	OECD 301A Ready Biodegradability - DOC Die-Away Test	90 % - Readily - 28 days	-	-
	OECD 301A 301A Ready Biodegradability - DOC Die-Away Test	0 % - Not readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
butan-1-ol	-	-	Readily
xylene	-	-	Readily
2,4,6-tris(dimethylaminomethyl)phenol	-	-	Not readily
ethylbenzene	-	-	Readily
N,N-diethyl-1,3-diaminopropane	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
butan-1-ol	1	3.16	low
xylene	3.12	8.1 - 25.9	low
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	low
ethylbenzene	3.6	-	low
N,N-diethyl-1,3-diaminopropane	0.3	6.3	low
1,2-diaminoethane	-7.02	-	low

12.4 Mobility in soil

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

Mobility : No known data available in our database.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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*







SECTION 13: Disposal considerations

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 no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
ADR/RID Class	UN3469	PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE	3 8  	III	No.	Tunnel code (D/E)
IMDG Class	UN3469	PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE	3 8  	III	No.	Emergency schedules (EmS) F-E, S-C
IATA Class	UN3469	PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE	3 8  	III	No.	-

PG* : Packing group

Env.* : Environmental hazards

14.6 Special precautions for user

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

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

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

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
C6: Flammable (R10)

15.2 Chemical safety assessment

This product contains substances for which Chemical Safety Assessments are still required.

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

SECTION 16: Other information

Full text of abbreviated H statements :	<p>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 (hearing organs) May cause damage to organs through prolonged or repeated exposure. (hearing organs) H412 Harmful to aquatic life with long lasting effects.</p>
Full text of classifications [CLP/GHS] :	<p>Acute Tox. 3, H311 ACUTE TOXICITY (dermal) - Category 3 Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4 Acute Tox. 4, H312 ACUTE TOXICITY (dermal) - Category 4 Acute Tox. 4, H332 ACUTE TOXICITY (inhalation) - Category 4 Aquatic Chronic 3, H412 LONG-TERM AQUATIC HAZARD - Category 3 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 Flam. Liq. 2, H225 FLAMMABLE LIQUIDS - Category 2 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3 Resp. Sens. 1, H334 RESPIRATORY SENSITIZATION - Category 1 Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1 STOT RE 2, H373 (hearing organs) SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (hearing organs) - Category 2 STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 STOT SE 3, H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3</p>

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

Classification	Justification
<p>FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 1B SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3</p>	<p>On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method</p>

Notice to reader

H 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.