

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

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

1.1 Product identifier

Product name : Hempel's Curing Agent 98290
Product identity : 9829010000, 000E0BDC
Product type : Curing agent

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

Field of application : yacht, ships and shipyards.
Identified uses : Professional applications.

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)
UK: **01633 833600** (08.00 - 17.00)
Ireland: **01 809 2166** (National Poisons Information Centre, Monday-Sunday; 08:00-22:00)

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

Date of issue : 10 June 2024

Date of previous issue : 22 December 2022.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Not classified.

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

2.2 Label elements

Hazard pictograms :

Signal word :

Hazard statements :

Precautionary statements :

Prevention : Wear protective gloves, protective clothing and eye or face protection. Avoid release to the environment.

Response : Collect spillage. 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 : Not applicable.

Supplemental label elements :  Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Special packaging requirements

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

Tactile warning of danger :

Not applicable.

2.3 Other hazards

 This mixture contains substances that are assessed to be a PBT or a vPvB, refer to Section 3.2.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

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 vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance of equivalent concern

[*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter $\leq 10 \mu\text{m}$ not bound within a matrix.

List numbers have no legal significance.

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 recognised skin cleanser. Do NOT use solvents or thinners.
Ingestion :	If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting unless directed to do so by medical personnel. Lower the head so that vomit will not re-enter the mouth and throat.
Protection of first-aiders :	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact :	Causes serious eye damage.
Inhalation :	No known significant effects or critical hazards.
Skin contact :	Causes severe burns. May cause an allergic skin reaction.
Ingestion :	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain watering redness
Inhalation :	No specific data.
Skin contact :	Adverse symptoms may include the following: pain or irritation redness blistering may occur
Ingestion :	Adverse symptoms may include the following: stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media : Recommended: alcohol resistant foam, 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 : In a fire or if heated, a pressure increase will occur and the container may burst. 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 metal oxide/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. 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). Water polluting material. May be harmful to the environment if released in large quantities.

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). 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

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
m-Xylylene-diamine	EU OEL (Europe, 2/2010). Absorbed through skin. (ACGIH) C: 0.1 mg/m ³

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
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	DNEL	Long term Inhalation	3.9 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1.1 mg/kg bw/day	Workers	Systemic
Methylstyrenated phenol	DNEL	Long term Dermal	3.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.4 mg/m ³	Workers	Systemic
benzyl alcohol	DNEL	Long term Inhalation	22 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	8 mg/kg bw/day	Workers	Systemic
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	DNEL	Long term Inhalation	3.9 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1.1 mg/kg bw/day	Workers	Systemic
2,4,6-tris(dimethylaminomethyl)phenol	DNEL	Long term Inhalation	0.13 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	0.15 mg/kg bw/day	Workers	Systemic
4-tert-butylphenol	DNEL	Long term Dermal	0.071 mg/kg	Workers	Systemic
	DNEL	Long term Inhalation	0.5 mg/m ³	Workers	Systemic
m-Xylylene-diamine	DNEL	Long term Dermal	0.33 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.2 mg/m ³	Workers	Systemic
polyethylenepolyamines	DNEL	Long term Inhalation	0.54 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	0.57 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.29 mg/m ³	General population [Consumers]	Systemic
	DNEL	Long term Dermal	0.25 mg/kg bw/day	General population [Consumers]	Systemic
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	DNEL	Long term Oral	0.41 mg/kg bw/day	General population [Consumers]	Systemic
	DNEL	Long term Oral	0.05 mg/kg bw/day	Workers	Systemic

Predicted effect concentrations

Product/ingredient name	Compartment Detail	Value	Method Detail
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	Fresh water	0.00434 mg/l	-
	Marine water	0.000434 mg/l	-
	Sewage Treatment Plant	3.84 mg/l	-
	Fresh water sediment	434.02 mg/kg	-
	Marine water sediment	43.4 mg/kg	-
Methylstyrenated phenol	Soil	86.78 mg/kg	-
	Sewage Treatment Plant	2.4 mg/l	-
	Fresh water	14 µg/l	-
	Marine	1.4 µg/l	-
	Fresh water sediment	1064 mg/kg dwt	-
benzyl alcohol	Marine water sediment	106 mg/kg dwt	-
	Soil	212 mg/kg dwt	-
	Soil	0.456 mg/kg wwt	Assessment Factors
	Sewage Treatment Plant	39 mg/l	Assessment Factors
	Sediment	5.27 mg/kg wwt	Assessment Factors
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	Marine water sediment	0.527 mg/kg wwt	Assessment Factors
	Marine	0.1 mg/l	Assessment Factors
	Fresh water	1 mg/l	Assessment Factors
	Fresh water	0.00434 mg/l	-
	Marine water	0.000434 mg/l	-
Sewage Treatment Plant	3.84 mg/l	-	

SECTION 8: Exposure controls/personal protection

2,4,6-tris(dimethylaminomethyl)phenol	Fresh water sediment	434.02 mg/kg	-
	Marine water sediment	43.4 mg/kg	-
	Soil	86.78 mg/kg	-
4-tert-butylphenol	Fresh water	0.084 mg/l	-
	Marine water	0.0084 mg/l	-
	Sewage Treatment Plant	0.2 mg/l	-
m-Xylylene-diamine	Fresh water	0.01 mg/l	-
	Marine water	0.001 mg/l	-
	Fresh water sediment	0.975 mg/kg dwt	-
polyethylenepolyamines	Marine water sediment	0.0975 mg/kg dwt	-
	Sewage Treatment Plant	1.5 mg/l	-
	Fresh water	0.094 mg/l	-
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	Marine water	0.0094 mg/l	-
	Fresh water sediment	0.43 mg/kg	-
	Marine water sediment	0.043 mg/kg	-
	Soil	0.045 mg/kg	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water	0.027 mg/l	-
	Marine water	0.003 mg/l	-
	Sewage Treatment Plant	0.13 mg/l	-
	Fresh water sediment	8.572 mg/kg dwt	-
	Marine water sediment	0.857 mg/kg dwt	-
	Soil	1.25 mg/kg dwt	-
	Soil	10 mg/kg	-
	Marine water	0.01 mg/l	-
	Sewage Treatment Plant	72 mg/l	-
	Fresh water	0.102 mg/l	-
	Fresh water sediment	0.622 mg/kg	-
	Marine water sediment	0.062 mg/kg	-

8.2 Exposure controls

Appropriate engineering controls

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

Individual protection measures

- General :** Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. Safety eyewear should be used when there is a likelihood of exposure.
- Hygiene measures :** Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.
- Eye/face protection :** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles 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.
 Since the actual work situation is unknown. Supplier of gloves should be contacted in order to find the appropriate type. Below listed glove(s) should be regarded as generic advice:
 Recommended: Silver Shield / Barrier / 4H gloves, polyvinyl alcohol (PVA), Viton®
 May be used: butyl rubber (>0.5 mm)
 Short term exposure: nitrile rubber (>0.3 mm), neoprene rubber (>0.1 mm), natural rubber (latex) (>0.4 mm), polyvinyl chloride (PVC), nitrile rubber (>0.1 mm), butyl rubber (>0.3 mm)
- Body protection :** Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.
 Wear suitable protective clothing.
 Chemical-resistant apron.
- Respiratory protection :** 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.

Environmental exposure controls

SECTION 8: Exposure controls/personal protection

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 :	Paste
Colour :	White
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: 94°C (201.2°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. Flammable in the presence of the following materials or conditions: heat.
Lower and upper explosive (flammable) limits :	1.3 - 13 vol %
Vapour pressure :	Testing not relevant or not possible due to nature of the product.
Vapour density :	Testing not relevant or not possible due to nature of the product.
Specific gravity :	0.78 g/cm ³
Partition coefficient (LogKow) :	Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature :	Lowest known value: 382°C (719.6°F) (2,4,6-tris(dimethylaminomethyl)phenol).
Decomposition temperature :	Testing not relevant or not possible due to nature of the product.
Viscosity :	Testing not relevant or not possible 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 and heat.
Oxidising properties :	Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight :	Weighted average: 12 %
Water % by weight :	Weighted average: 0 %
VOC content :	33 g/l
TOC Content :	Weighted average: 28 g/l
Solvent Gas :	Weighted average: 0.022 m ³ /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

No specific data.

10.5 Incompatible materials

Reactive or incompatible with the following materials: oxidising materials.
Slightly reactive or incompatible with the following materials: reducing materials.

SECTION 10: Stability and reactivity

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 metal oxide/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.

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.

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Methylstyrenated phenol	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	>4178 mg/m ³	4 hours
	LD50 Oral	Rat	1230 mg/kg	-
titanium dioxide	LC50 Inhalation Dusts and mists	Rat	>6.8 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
2,4,6-tris(dimethylaminomethyl) phenol	LD50 Dermal	Rat	1280 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
	LD50 Oral	Rat	2169 mg/kg	-
4-tert-butylphenol	LC50 Inhalation Dusts and mists	Rat	>5600 mg/m ³	4 hours
	LD50 Dermal	Rabbit	2288 mg/kg	-
	LD50 Oral	Rat	2951 mg/kg	-
m-Xylylene-diamine	LC50 Inhalation Dusts and mists	Rat	1.34 mg/l	4 hours
	LD50 Dermal	Rabbit	>3100 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-
polyethylenepolyamines	LD50 Dermal	Rabbit	1465 mg/kg	-
	LD50 Oral	Rat	1716 mg/kg	-
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	LD50 Oral	Rat	910 mg/kg	-
pine oil	LD50 Dermal	Rabbit	5 g/kg	-
	LD50 Oral	Rat	2.1 g/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 98290	12000				
benzyl alcohol	1200				
4-tert-butylphenol	2951	2288			
m-Xylylene-diamine	930			11	
polyethylenepolyamines	1716	1465			
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	910				
pine oil	2100	5000			

Irritation/Corrosion

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	Eyes - Severe irritant	Rabbit	-	-
Methylstyrenated phenol	Eyes - Mild irritant	Rabbit	-	-
benzyl alcohol	Skin - Irritant	Rabbit	-	-
	Eyes - Visible necrosis	Rabbit	-	-
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	Skin - Mild irritant	Rabbit	-	-
	Eyes - Severe irritant	Rabbit	-	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent
2,4,6-tris(dimethylaminomethyl) phenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms
4-tert-butylphenol	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams
	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
m-Xylylene-diamine	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams
	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms
pine oil	Respiratory - Severe irritant	Rabbit	-	-
	Skin - Severe irritant	Rabbit	-	24 hours 750 Micrograms
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams

Sensitiser

Product/ingredient name	Route of exposure	Species	Result
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	skin	Mouse	Sensitising
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	skin	Mouse	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
No known data available in our database.			

Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

Product/ingredient name	Result
No known data available in our database.	

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

No known significant effects or critical hazards.

Sensitisation :

Contains polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine, Methylstyrenated phenol, benzyl alcohol, polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine, m-Xylylene-diamine, polyethylenepolyamines. May produce an allergic reaction.

11.2 Information on other hazards

SECTION 11: Toxicological information

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
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	Acute EC50 4.34 mg/l	Algae	72 hours
	Acute EC50 7.07 mg/l	Daphnia	48 hours
Methylstyrenated phenol	Acute LC50 7.07 mg/l	Fish	96 hours
	Acute EC50 15 mg/l	Algae	72 hours
benzyl alcohol	Acute EC50 14 - 51 mg/l	Daphnia	48 hours
	Acute EC50 25.8 mg/l	Fish	96 hours
	Acute EC50 230 mg/l	Daphnia	48 hours
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	Acute LC50 770 mg/l	Algae	72 hours
	Acute LC50 460 mg/l	Fish	96 hours
	Acute EC50 4.34 mg/l	Algae	72 hours
titanium dioxide	Acute EC50 7.07 mg/l	Daphnia	48 hours
	Acute LC50 7.07 mg/l	Fish	96 hours
2,4,6-tris(dimethylaminomethyl) phenol	Acute LC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
4-tert-butylphenol	Acute EC50 84 mg/l	Algae	72 hours
	Acute LC50 175 mg/l	Fish	96 hours
m-Xylylene-diamine	Acute EC50 14 mg/l	Algae	72 hours
	Acute EC50 3.4 mg/l	Daphnia	48 hours
	Acute LC50 1.6 mg/l	Fish	48 hours
	Acute LC50 5140 - 5620 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 2.3 mg/l Fresh water	Fish - Cyprinus carpio - Adult	28 days
	Acute EC50 20.3 mg/l	Algae	72 hours
	Acute EC50 15.2 mg/l	Daphnia - Daphnia	48 hours
polyethylenepolyamines	Acute LC50 87.6 mg/l	Fish - Leuciscus idus	96 hours
	Acute NOEC 4.7 mg/l	Daphnia	21 days
	Acute EC50 20 mg/l	Algae	72 hours
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	Acute EC50 31.1 mg/l	Daphnia	48 hours
	Acute EC50 29.5 mg/l	Algae	72 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine benzyl alcohol	OECD 301D Ready Biodegradability - Closed Bottle Test	15 % - Not readily - 28 days	-	-
	OECD 301A 301A Ready Biodegradability - DOC Die-Away Test	95 - 97 % - Readily - 21 days	-	-
	OECD 301C 301C Ready Biodegradability - Modified MITI Test (I)	92 - 96 % - Readily - 14 days	-	-
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	OECD 301D Ready Biodegradability - Closed Bottle Test	15 % - Not readily - 28 days	-	-
	OECD 301D 301D Ready Biodegradability - Closed Bottle Test	4 % - Not readily - 28 days	-	-
2,4,6-tris(dimethylaminomethyl) phenol	OECD 301A Ready Biodegradability - DOC Die-Away Test	98 % - Readily - 28 days	-	-
	OECD 301B 301B Ready Biodegradability - CO2 Evolution Test	49 % - Inherent - 28 days	-	-
m-Xylylene-diamine	EU EC no. 440/2008, Annex C.4-A	7 % - Not readily - 28 days	-	-

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	-	-	Not readily
Methylstyrenated phenol	-	-	Not readily
benzyl alcohol	-	-	Readily
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	-	-	Not readily
2,4,6-tris(dimethylaminomethyl) phenol	-	-	Not readily
4-tert-butylphenol	-	-	Readily
m-Xylylene-diamine	-	-	Inherent
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	10.34	1.89	low
Methylstyrenated phenol	3.627	-	low
benzyl alcohol	0.87	1.37	low
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	10.34	1.89	low
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	low
4-tert-butylphenol	3	44 - 48	low
m-Xylylene-diamine	0.18	2.69	low
polyethylenepolyamines	-2.65	-	low
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	-0.3	-	low

12.4 Mobility in soil

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

Mobility : No known data available in our database.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	No	N/A	No	No	No	N/A	No
Methylstyrenated phenol	No	N/A	N/A	No	SVHC (Candidate)	Specified	Specified
benzyl alcohol	No	N/A	No	No	No	N/A	No
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	No	N/A	No	No	No	N/A	No
2,4,6-tris(dimethylaminomethyl) phenol	No	N/A	N/A	No	N/A	N/A	N/A
4-tert-butylphenol	No	N/A	No	Yes	No	N/A	No
m-Xylylene-diamine	No	N/A	No	No	No	N/A	No
polyethylenepolyamines	No	N/A	N/A	No	N/A	N/A	N/A
formaldehyde, polymeric reaction products with 4-tert-butylphenol, m-phenylenebis(methylamine) and trimethylhexane-1,6-diamine	No	N/A	N/A	No	N/A	N/A	N/A
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	No	N/A	N/A	No	N/A	N/A	N/A
pine oil	No	N/A	N/A	No	N/A	N/A	N/A

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.

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*	14.5 Additional information
ADR/RID Class	UN1759	CORROSIVE SOLID, N.O.S. (polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine)	8  	II	Yes.	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Tunnel code (E)
IMDG Class	UN1759	CORROSIVE SOLID, N.O.S.. (polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine)	8  	II	Yes.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules F-A, S-B
IATA Class	UN1759	CORROSIVE SOLID, N.O.S. (polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine)	8 	II	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 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
Methylstyrenated phenol 4-tert-butylphenol	vPvB Endocrine disrupting properties for environment	Candidate Candidate	- ED/71/2019, EU/2019/1194	1/22/2024 7/16/2019

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.

SECTION 15: Regulatory information

Seveso category

E2: Hazardous to the aquatic environment - Chronic 2

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 :

H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 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.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled.
 H351 Suspected of causing cancer.
 H361f Suspected of damaging fertility.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.
 H412 Harmful to aquatic life with long lasting effects.
 EUH071 Corrosive to the respiratory tract.

Full text of classifications [CLP/GHS] :

Acute Tox. 4 ACUTE TOXICITY - Category 4
 Aquatic Acute 1 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
 Aquatic Chronic 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
 Aquatic Chronic 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
 Aquatic Chronic 3 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
 Carc. 2 CARCINOGENICITY - Category 2
 Eye Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
 Eye Irrit. 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
 Flam. Liq. 3 FLAMMABLE LIQUIDS - Category 3
 Repr. 2 REPRODUCTIVE TOXICITY - Category 2
 Skin Corr. 1A SKIN CORROSION/IRRITATION - Category 1A
 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. 1A SKIN SENSITISATION - Category 1A
 Skin Sens. 1B SKIN SENSITISATION - Category 1B

Classification	Justification
Not classified.	

Notice to reader

Indicates information that has changed from previously issued version.

The information contained in this safety data sheet is based on the present state of knowledge and EU and national legislation. It provides guidance on health, safety and environmental aspects for handling the product in a safe way and should not be construed as any guarantee of the technical performance or suitability for particular applications.

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

This document is intended to communicate the conditions of safe use for the product and should always be read in combination with the product's Safety Data Sheet and labels.

General description of the process covered

Indoor or outdoor spray painting by professionals or with brush, roller, putty knife, dipping etc. with good general room ventilation.

This safe use information is linked to : Professional spray painting and/or low-energy painting, local effect - Level III
Skin Corr. 1, Eye Dam. 1, Resp. Sens. 1 or EUH071

Sector(s) of use : Industrial uses - Professional uses

Product category(ies) : Coatings and paints, thinners, paint removers

Operational conditions

Place of use : Indoor or outdoor use

Risk management measures (RMM)

Contributing activity	Process category (ies)	Maximum duration	Ventilation		Respiratory	Eye	Hands
			Type	and air changes per hour			
Preparation of material for application	PROC05	More than 4 hours	Good general room ventilation - Outdoors	3 - 5	Wear a respirator conforming to EN140 with an assigned protection factor of at least 10.	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Loading of application equipment and handling of coated parts before curing	PROC08a	More than 4 hours	Good general room ventilation - Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Professional application of coatings by brush or roller	PROC10	More than 4 hours	Good general room ventilation - Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Professional application of coatings by spraying	PROC11	More than 4 hours	Good general room ventilation - Outdoors	3 - 5	Wear a respirator conforming to EN140 with an assigned protection factor of at least 10.	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Film formation - force drying, stoving and other technologies	PROC04	More than 4 hours	Good general room ventilation - Outdoors	3 - 5	None	None	Wear suitable gloves tested to EN374.
Cleaning	PROC05	More than 4 hours	Good general room ventilation - Outdoors	3 - 5	Wear a respirator conforming to EN140 with an assigned protection factor of at least 10.	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.
Waste management	PROC08a	More than 4 hours	Good general room ventilation - Outdoors	3 - 5	None	Use eye protection according to EN 166.	Wear chemical-resistant gloves (tested to EN374) in combination with 'basic' employee training.

See chapter 8 of this Safety Data Sheet for specifications.

