

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 98290
Product identity : 9829010000
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 : Consumer applications, 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)

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

Date of issue : 30 April 2018

Date of previous issue : 4 July 2017.

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]

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 SENSITISATION - Category 1
Aquatic Chronic 2, H411 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2

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

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements :

General : If medical advice is needed, have product container or label at hand. Keep out of reach of children.
Prevention : Avoid breathing vapours, spray or mists. Wear protective gloves/protective clothing/eye protection/face protection.
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 : Store locked up.
Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

SECTION 2: Hazards identification

Hazardous ingredients : **P**olymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine
Methylstyrenated phenol
2,4,6-tris(dimethylaminomethyl)phenol
Amides, from Me epoxyhydroxyoctadecanoate, tetraethylenepentamine and vegetable-oil fatty acids
triethylenetetramine
m-Xylylene-diamine
2,2,4- and 2,4,4- trimethylhexamethylene diamine

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Yes, applicable.

Tactile warning of danger : Yes, 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
P olymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	REACH #: 01-2119972320-44 EC: 500-191-5 CAS: 68082-29-1	≥10 - ≤25	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 2, H411	- [1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥10 - ≤25	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	- [1]
Methylstyrenated phenol	REACH #: 01-2119555274-38 EC: 270-966-8 CAS: 68512-30-1	≥10 - ≤25	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412	- [1]
2,4,6-tris(dimethylaminomethyl)phenol	REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2 CAS: 68443-08-3	≥1 - ≤3	Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318	- [1]
Amides, from Me epoxyhydroxyoctadecanoate, tetraethylenepentamine and vegetable-oil fatty acids triethylenetetramine	EC: 203-950-6 CAS: 112-24-3 Index: 612-059-00-5	≥1 - ≤3	Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	- [1]
m-Xylylene-diamine	REACH #: 01-2119480150-50 EC: 216-032-5 CAS: 1477-55-0	<1	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412	- [1] [2]
nonylphenol	EC: 246-672-0 CAS: 25154-52-3 Index: 601-053-00-8	<1	EUH071 Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Repr. 2, H361fd (Fertility and Unborn child) Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)	- [1] [5]
2,2,4- and 2,4,4-trimethylhexamethylene diamine	EC: 247-134-8 CAS: 25620-58-0	<1	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	- [1]
			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

SECTION 3: Composition/information on ingredients

- [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 unconscious, place in recovery position and seek medical advice.
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

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 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
 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

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 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:

Short term exposure: neoprene rubber, natural rubber (latex), polyvinyl chloride (PVC)
Recommended: polyvinyl alcohol (PVA), Silver Shield / Barrier / 4H gloves, Viton®
May be used: butyl rubber, nitrile rubber

Body protection :

Personal protective equipment for the body should be selected based on the task being performed and the risks involved handling this product.

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
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 - 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
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: 337.78°C (640°F) (triethylenetetramine).
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: 15 %
Water % by weight :	Weighted average: 0 %
VOC content :	32 g/l
TOC Content :	Weighted average: 29 g/l
Solvent Gas :	Weighted average: 0.026 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

 Extremely reactive or incompatible with the following materials: acids.
Reactive or incompatible with the following materials: oxidizing materials and organic 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

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.

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Benzyl alcohol	LC50 Inhalation Dusts and mists	Rat	>4178 mg/m ³	4 hours
	LD50 Oral	Rat	1620 mg/kg	-
Methylstyrenated phenol	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
2,4,6-tris(dimethylaminomethyl) phenol	LD50 Dermal	Rat	1280 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
triethylenetetramine	LD50 Oral	Rat	2169 mg/kg	-
	LD50 Dermal	Rabbit	550 mg/kg	-
m-Xylylene-diamine	LD50 Oral	Rat	1716 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	1.34 mg/l	4 hours
nonylphenol	LD50 Dermal	Rabbit	>3100 mg/kg	-
	LD50 Oral	Rat	930 mg/kg	-
2,2,4- and 2,4,4-trimethylhexamethylene diamine	LD50 Dermal	Rabbit	2031 mg/kg	-
	LD50 Oral	Rat	1412 mg/kg	-
	LD50 Oral	Rat	910 mg/kg	-

Acute toxicity estimates

Route	ATE value
Oral	7291.8 mg/kg
Dermal	36678.9 mg/kg
Inhalation (vapours)	88 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
Polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine benzyl alcohol	Eyes - Severe irritant	Rabbit	-	-
	Eyes - Irritant	Rabbit	-	-
	Skin - Mild irritant	Rabbit	-	-
Methylstyrenated phenol	Eyes - Mild irritant	Rabbit	-	-
	Skin - Irritant	Rabbit	-	-
2,4,6-tris(dimethylaminomethyl) phenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams
triethylenetetramine	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams
	Skin - Severe irritant	Rabbit	-	24 hours 5 milligrams
m-Xylylene-diamine	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms
	Skin - Severe irritant	Rabbit	-	24 hours 750 Micrograms
nonylphenol	Respiratory - Severe irritant	Rabbit	-	-
	Skin - Severe irritant	Rabbit	-	-
2,2,4- and 2,4,4-trimethylhexamethylene diamine	Eyes - Severe irritant	Rabbit	-	-
	Skin - Severe irritant	Mouse	-	-
	Eyes - Severe irritant	Rabbit	-	-

Sensitiser

SECTION 11: Toxicological information

Product/ingredient name	Route of exposure	Species	Result
polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine triethylenetetramine 2,2,4- and 2,4,4-trimethylhexamethylene diamine	skin	Mouse	Sensitising
	skin	Guinea pig	Sensitising
	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
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

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
onylphenol	-	-	Repr. 2, H361d (Unborn child)	Repr. 2, H361f (Fertility)

Sensitisation :

Contains polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine, Methylstyrenated phenol, triethylenetetramine, m-Xylylene-diamine, 2,2,4- and 2,4,4-trimethylhexamethylene diamine. 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. 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
benzyl alcohol	Acute LC50 7.07 mg/l	Fish	96 hours
	Acute EC50 230 mg/l	Daphnia	48 hours
Methylstyrenated phenol	Acute IC50 770 mg/l	Algae	72 hours
	Acute LC50 460 mg/l	Fish	96 hours
	Acute EC50 15 mg/l	Algae	72 hours
	Acute EC50 14 - 51 mg/l	Daphnia	48 hours
2,4,6-tris(dimethylaminomethyl) phenol	Acute EC50 25.8 mg/l	Fish	96 hours
	Acute EC50 84 mg/l	Algae	72 hours
triethylenetetramine	Acute LC50 175 mg/l	Fish	96 hours
	Acute EC50 20 mg/l	Algae	72 hours

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m-Xylylene-diamine	Acute EC50 31.1 mg/l Acute LC50 330 mg/l Acute EC50 12 mg/l Acute EC50 15.2 mg/l Acute LC50 75 mg/l	Daphnia Fish Algae Daphnia - Daphnia Fish - Leuciscus idus	48 hours 96 hours 72 hours 48 hours 96 hours
nonylphenol	Acute NOEC 4.7 mg/l Acute EC50 0.085 mg/l Acute LC50 0.051 mg/l Marine water	Daphnia Daphnia Crustaceans - Americamysis bahia - Larvae Fish	21 days 48 hours 48 hours 96 hours
2,2,4- and 2,4,4-trimethylhexamethylene diamine	Acute LC50 0.128 mg/l Chronic NOEC 694 µg/l Fresh water Chronic NOEC 901 µg/l Fresh water Chronic NOEC 24 µg/l Fresh water Chronic NOEC 2.9 µg/l Fresh water Acute EC50 29.5 mg/l	Algae - Pseudokirchneriella subcapitata Aquatic plants - Lemna minor Daphnia - Daphnia magna Fish - Oryzias latipes - Fry Algae	96 hours 96 hours 21 days 100 days 72 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
benzyl alcohol	OECD 301C 301C Ready Biodegradability - Modified MITI Test (I)	92 - 96 % - Readily - 14 days	-	-
2,4,6-tris(dimethylaminomethyl) phenol	OECD 301D 301D Ready Biodegradability - Closed Bottle Test	4 % - Not readily - 28 days	-	-
m-Xylylene-diamine	OECD 301B 301B Ready Biodegradability - CO2 Evolution Test	49 % - Inherent - 28 days	-	-
nonylphenol	OECD 301B Ready Biodegradability - CO2 Evolution Test	48.2 % - 35 days	-	-
2,2,4- and 2,4,4-trimethylhexamethylene diamine	-	7 % - Not readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine	-	-	Not readily
benzyl alcohol	-	-	Readily
Methylstyrenated phenol	-	-	Not readily
2,4,6-tris(dimethylaminomethyl) phenol	-	-	Not readily
m-Xylylene-diamine	-	-	Inherent
2,2,4- and 2,4,4-trimethylhexamethylene 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	-	high
benzyl alcohol	0.87	1.37	low
Methylstyrenated phenol	3.627	-	low
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	low
triethylenetetramine	-1.66 - -1.4	-	low
m-Xylylene-diamine	0.18	2.69	low
nonylphenol	3.28	154.88	low
2,2,4- and 2,4,4- trimethylhexamethylene diamine	0.77	-	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.

SECTION 12: Ecological information

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 no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env*	Additional information
ADR/RID Class	UN3066	PAINT	8  	III	Yes.	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Tunnel code (E)
IMDG Class	UN3066	PAINT. (polymer of C18-unsatd. fatty acids dimers with tall-oil fatty acids and triethylenetetramine)	8  	III	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	UN3066	PAINT	8 	III	Yes.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

PG* : Packing group

Env.* : Environmental hazards

14.6 Special precautions for user

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

14.7 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

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
 Nonylphenol, branched and linear [substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof]	Substance of equivalent concern for environment	Candidate	ED/169/2012	19-Dec-2012

SECTION 15: Regulatory information

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
E2: Hazardous to the aquatic environment - Chronic 2 9ii: Toxic for the environment

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
Full text of abbreviated H statements :	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. H361fd Suspected of damaging fertility. Suspected of damaging the unborn child. 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.
Full text of classifications [CLP/GHS] :	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 Acute 1, H400 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 Aquatic Chronic 1, H410 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 Aquatic Chronic 2, H411 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 Aquatic Chronic 3, H412 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 EUH071 Corrosive to the respiratory tract. Eye Dam. 1, H318 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 Repr. 2, H361fd REPRODUCTIVE TOXICITY (Fertility and Unborn child) - Category 2 Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B Skin Corr. 1C, H314 SKIN CORROSION/IRRITATION - Category 1C Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2 Skin Sens. 1, H317 SKIN SENSITISATION - Category 1 Skin Sens. 1A, H317 SKIN SENSITISATION - Category 1A Skin Sens. 1B, H317 SKIN SENSITISATION - Category 1B

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

Classification	Justification
SKIN CORROSION/IRRITATION - Category 1B	Calculation method
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1	Calculation method
SKIN SENSITISATION - Category 1	Calculation method
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2	Calculation method

Notice to reader

Indicates information that has changed from previously issued version.

SECTION 16: Other information

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.