



SAFETY DATA SHEET

5501 Activator (for 5500 system)

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

1.1 Product identifier

Product name : 5501 Activator (for 5500 system)
Product description : Hardener.
Product type : Liquid.

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

Identified uses	
Industrial uses Professional uses	
Uses advised against	Reason
Consumer use	Product is not intended for consumer use.

1.3 Details of the supplier of the safety data sheet

Rust-Oleum Europe - Martin Mathys NV, Kolenbergstraat 23, B-3545 Zelem, Belgium
 Telephone no.: +32 (0) 13 460 200
 Fax no.: +32 (0) 13 460 201

e-mail address of person responsible for this SDS : rpmeurohas@ro-m.com

1.4 Emergency telephone number

Supplier

Telephone number : +44 (0) 207 858 1228
Hours of operation : 24 / 7

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]

Acute Tox. 4, H302
 Skin Corr. 1C, H314
 Eye Dam. 1, H318
 Skin Sens. 1, H317
 Aquatic Acute 1, H400 (M=1)
 Aquatic Chronic 1, H410 (M=1)

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.
 See Section 16 for the full text of the H statements declared above.
 See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.
<u>Precautionary statements</u>		
General	:	Not applicable.
Prevention	:	P280 - Wear protective gloves and eye protection: - neoprene gloves and safety glasses with side-shields. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment.
Response	:	P301 - IF SWALLOWED: P330 - Rinse mouth. P331 - Do NOT induce vomiting. P303 - IF ON SKIN (or hair): P361 - Take off immediately all contaminated clothing. P353 - Rinse skin with water [or shower]. P310 - Immediately call a doctor. P305 - IF IN EYES: P351 - Rinse cautiously with water for several minutes. P338 - Remove contact lenses, if present and easy to do. Continue rinsing. P391 - Collect spillage.
Storage	:	P405 - Store locked up.
Disposal	:	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	:	Amides, from C8-10-fatty acids and tetraethylenepentamine; benzyl alcohol; Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 2-(butoxymethyl)oxirane and 2-(chloromethyl)oxirane
Supplemental label elements	:	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	Not applicable.
UFI Code	:	J0F0-N01R-C001-NX2C
<u>Special packaging requirements</u>		
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** : Mixture

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
Amides, from C8-10-fatty acids and tetraethylenepentamine	REACH #: 01-2120629109-55 EC: 285-080-7 CAS: 85029-55-6	≥25 - ≤50	Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
benzyl alcohol	REACH #: 01-2119492630-38 EC: 202-859-9 CAS: 100-51-6 Index: 603-057-00-5	≥25 - ≤50	Acute Tox. 4, H302 Acute Tox. 4, H332	[1]
Phenol, 4,4'-(1-methylethylidene) bis-, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 2-(butoxymethyl)oxirane and 2-(chloromethyl)oxirane	REACH #: 01-2119972329-26 CAS: 72361-56-9	≥10 - ≤25	Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317	[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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
 [2] Substance with a workplace exposure limit
 [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

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. 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.
- 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 the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- 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.

SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit 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. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture 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.

Ingestion may cause nausea, diarrhea and vomiting.

This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact.

Contains Amides, from C8-10-fatty acids and tetraethylenepentamine, Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 5-amino-1,3,3-trimethylcyclohexanemethanamine, 2-(butoxymethyl)oxirane and 2-(chloromethyl)oxirane. May produce an allergic reaction.

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 : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO₂, powders, water spray.

Unsuitable extinguishing media : Do not use water jet.

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 very 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.

SECTION 5: Firefighting measures

Hazardous thermal decomposition products : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 halogenated compounds

5.3 Advice for firefighters

Special protective actions for fire-fighters : 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.

Special protective equipment for fire-fighters : 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.

Additional information : No unusual hazard if involved in a fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : 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. Dispose of via a licensed waste disposal contractor. 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

The information in this section contains generic advice and guidance.

- 7.1 Precautions for safe handling** :
- Keep away from heat, sparks and flame. No sparking tools should be used.
 - Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.
 - Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
 - Put on appropriate personal protective equipment (see Section 8).
 - Never use pressure to empty. Container is not a pressure vessel.
 - Always keep in containers made from the same material as the original one.
 - Comply with the health and safety at work laws.
 - Do not allow to enter drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Do not store above the following temperature: 35°C (95°F). Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E1	100	200

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

- 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.

DNELs/DMELs

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
Amides, from C8-10-fatty acids and tetraethylenepentamine benzyl alcohol	DNEL	Long term Oral	29 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	47 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	450 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	9,5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	90 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	28,5 mg/ kg bw/day	Consumers	Systemic
	DNEL	Short term Inhalation	40,55 mg/ m ³	Consumers	Systemic
	DNEL	Short term Oral	25 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	5,7 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	8,11 mg/m ³	Consumers	Systemic
	DNEL	Long term Oral	5 mg/kg bw/day	Consumers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
Amides, from C8-10-fatty acids and tetraethylenepentamine benzyl alcohol	Fresh water	30,7 µg/l	Assessment Factors
	Marine water	3,07 µg/l	Assessment Factors
	Sewage Treatment Plant	2,3 mg/l	Assessment Factors
	Fresh water sediment	119,8 mg/kg dwt	Equilibrium Partitioning
	Marine water sediment	11,98 mg/kg dwt	Equilibrium Partitioning
	Soil	9,44 mg/kg dwt	Assessment Factors
	Secondary Poisoning	20 mg/kg	-
	Fresh water	1 mg/l	Assessment Factors
	Marine	0,1 mg/l	Assessment Factors
	Fresh water sediment	5,27 mg/kg	Assessment Factors
	Marine water sediment	0,527 mg/kg	Assessment Factors
	Soil	0,456 mg/kg	Assessment Factors
	Sewage Treatment Plant	39 mg/l	Assessment Factors

8.2 Exposure controls

Appropriate engineering controls : Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 8: Exposure controls/personal protection

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. Recommended: safety glasses with side-shields (EN 166) .

Skin protection

Hand protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: > 8 hours (breakthrough time): neoprene (0.65mm)

The recommendation for the type or types of glove to use when handling this product is based on information from the following source:

EN 374

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Wear overalls or long sleeved shirt. (EN 467) .

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: A respirator is not needed under normal and intended conditions of product use.

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

Appearance

Physical state : Liquid. [Thick, oily liquid.]

Colour : Amber.

Odour : Faint odour. [Slight]

Odour threshold : Not available.

pH : 10 to 12

Melting point/freezing point : -10°C

Initial boiling point and boiling range : >200°C

SECTION 9: Physical and chemical properties

Flash point	: Closed cup: >130°C [ISO EN 2719 / DIN 51758 / ASTM D93]
Evaporation rate	: Not available.
Flammability (solid, gas)	: Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat. Emits toxic fumes when heated to decomposition.
Upper/lower flammability or explosive limits	: Not available.
Vapour pressure	: <0,013 kPa [room temperature]
Vapour density	: >1 [Air = 1]
Relative density	: 1
Solubility(ies)	: Partially soluble in the following materials: acetone.
Partition coefficient: n-octanol/ water	: Not available.
Auto-ignition temperature	: >250°C
Decomposition temperature	: >200°C
Viscosity	: Not available.
Explosive properties	: Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Oxidising properties	: Not available.

9.2 Other information

No additional information.

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	: Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
10.5 Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire, toxic gases including CO, CO2 and smoke can be generated.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
Amides, from C8-10-fatty acids and tetraethylenepentamine benzyl alcohol	LD50 Oral	Rat - Female	>2000 mg/kg	-
	LC50 Inhalation Vapour	Rat	>4178 mg/l	4 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1230 mg/kg	-

SECTION 11: Toxicological information**Conclusion/Summary** : Harmful if swallowed.**Acute toxicity estimates**

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
benzyl alcohol	Skin - Moderate irritant	Pig	-	100 Percent	-

Conclusion/Summary**Skin** : Causes severe skin burns and eye damage.**Eyes** : Causes serious eye damage.**Respiratory** : Based on available data, the classification criteria are not met.**Sensitisation**

Product/ingredient name	Route of exposure	Species	Result
Amides, from C8-10-fatty acids and tetraethylenepentamine	skin	Guinea pig	Sensitising

Conclusion/Summary**Skin** : May cause an allergic skin reaction.**Respiratory** : Based on available data, the classification criteria are not met.**Mutagenicity**

Product/ingredient name	Test	Experiment	Result
Amides, from C8-10-fatty acids and tetraethylenepentamine	OECD 473 473 In vitro Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Human Metabolic activation: with and without	Negative

Conclusion/Summary : Based on available data, the classification criteria are not met.**Carcinogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
benzyl alcohol	Negative - Oral - TD	Rat	-	103 weeks; 5 days per week

Conclusion/Summary : Based on available data, the classification criteria are not met.**Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Amides, from C8-10-fatty acids and tetraethylenepentamine	Negative	Negative	Negative	Rat - Male	Oral: 300 mg/kg	2 weeks; 24 hours per day

Conclusion/Summary : Based on available data, the classification criteria are not met.**Teratogenicity**

Product/ingredient name	Result	Species	Dose	Exposure
benzyl alcohol	Negative - Route of exposure unreported	Mouse - Female	550 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.**Specific target organ toxicity (single exposure)**

Not available.

Specific target organ toxicity (repeated exposure)

SECTION 11: Toxicological information

Not available.

Aspiration hazard

Not available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Short term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Long term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Potential chronic health effects**

Not available.

Conclusion/Summary : Based on available data, the classification criteria are not met.**General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.**Carcinogenicity** : No known significant effects or critical hazards.**Mutagenicity** : No known significant effects or critical hazards.**Teratogenicity** : No known significant effects or critical hazards.**Developmental effects** : No known significant effects or critical hazards.**Fertility effects** : No known significant effects or critical hazards.**Other information** : Not available.**SECTION 12: Ecological information****12.1 Toxicity**

There are no data available on the mixture itself.
Do not allow to enter drains or watercourses.

The mixture has been assessed following the summation method of the CLP Regulation (EC) No 1272/2008 and is classified for eco-toxicological properties accordingly. See Sections 2 and 3 for details.

Product/ingredient name	Result	Species	Exposure
Amides, from C8-10-fatty acids and tetraethylenepentamine	EC50 0,538 mg/l Fresh water	Algae	72 hours
	EC50 3,58 mg/l Fresh water	Daphnia spec.	48 hours
benzyl alcohol	LC50 0,19 mg/l Fresh water	Fish	96 hours
	NOEC 0,32 mg/l	Daphnia spec.	21 days
	Acute EC50 770 mg/l	Algae	72 hours
	Acute LC50 646 mg/l	Fish - Leuciscus idus	48 hours
	Acute LC50 460000 µg/l Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Conclusion/Summary : Based on available data, the classification criteria are not met.**12.2 Persistence and degradability**

SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
Amides, from C8-10-fatty acids and tetraethylenepentamine	OECD 301D 301D Ready Biodegradability - Closed Bottle Test	17 % - Inherent - 28 days	-	-
benzyl alcohol	OECD 301A	96 % - Readily - 21 days	-	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Amides, from C8-10-fatty acids and tetraethylenepentamine	-	17%; < 28 day(s)	Inherent
benzyl alcohol	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Amides, from C8-10-fatty acids and tetraethylenepentamine	2,2	1	low
benzyl alcohol	0,87	-	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Nonvolatile liquid.

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

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods**Product**

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

Disposal considerations : Do not allow to enter drains or watercourses. Dispose of according to all federal, state and local applicable regulations. If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned. For further information, contact your local waste authority.

European waste catalogue (EWC)

The European Waste Catalogue classification of this product, when disposed of as waste, is:

SECTION 13: Disposal considerations

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances









Packaging

Methods of disposal : 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.

Disposal considerations : Using information provided in this safety data sheet, advice should be obtained from the relevant waste authority on the classification of empty containers. Empty containers must be scrapped or reconditioned. Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of split material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN 2735	UN 2735	UN 2735	UN 2735
14.2 UN proper shipping name	Polyamines, liquid, corrosive, n.o.s. [Amides, from C8-10-fatty acids and tetraethylenepentamine]	Polyamines, liquid, corrosive, n.o.s. [Amides, from C8-10-fatty acids and tetraethylenepentamine]	Polyamines, liquid, corrosive, n.o.s. Marine pollutant [Amides, from C8-10-fatty acids and tetraethylenepentamine]	Polyamines, liquid, corrosive, n.o.s. [Amides, from C8-10-fatty acids and tetraethylenepentamine]
14.3 Transport hazard class(es)	8  	8  	8  	8  
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.
Additional information	Limited quantity: LQ7 Remarks: (≤ 5L:) Limited Quantity - ADR/IMDG 3.4 ADR Tunnel code: (E)	-	Emergency schedules (EmS): F-A + S-B Remarks: (≤ 5L:) Limited Quantity - ADR/IMDG 3.4.6 Marine pollutant	Passenger and Cargo Aircraft Quantity limitation: 5 L Packaging instructions: 852 Cargo Aircraft Only Quantity limitation: 60 L Packaging instructions: 856 Limited Quantities - Passenger Aircraft Quantity limitation: 1 L Packaging instructions: Y 841

SECTION 14: Transport information

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.

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

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

VOC for Ready-for-Use Mixture : 2004/42/EC - IIA/j: 500g/l (2010). <= 155g/l VOC.

Europe inventory : All components are listed or exempted.

Black List Chemicals (76/464/EEC) :

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

E1

National regulations

Industrial use : The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation. The provisions of the national health and safety at work regulations apply to the use of this product at work.

References : EH40/2005 Workplace exposure limits
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2016/918

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

SECTION 15: Regulatory information

Not listed.

[Rotterdam Convention on Prior Informed Consent \(PIC\)](#)

Not listed.

[UNECE Aarhus Protocol on POPs and Heavy Metals](#)

Not listed.

CN code : 3824 90 70

[International lists](#)

[National inventory](#)

- Australia** : All components are listed or exempted.
- Canada** : At least one component is not listed.
- China** : At least one component is not listed.
- Japan** : **Japan inventory (ENCS)**: At least one component is not listed.
Japan inventory (ISHL): Not determined.
- Malaysia** : Not determined.
- New Zealand** : At least one component is not listed.
- Philippines** : At least one component is not listed.
- Republic of Korea** : At least one component is not listed.
- Taiwan** : At least one component is not listed.
- Turkey** : Not determined.
- United States** : At least one component is not listed.

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

[Abbreviations and acronyms](#)

- : ATE = Acute Toxicity Estimate
- : CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- : DMEL = Derived Minimal Effect Level
- : DNEL = Derived No Effect Level
- : EUH statement = CLP-specific Hazard statement
- : PBT = Persistent, Bioaccumulative and Toxic
- : PNEC = Predicted No Effect Concentration
- : RRN = REACH Registration Number
- : vPvB = Very Persistent and Very Bioaccumulative

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

Classification	Justification
Acute Tox. 4, H302	Expert judgment
Skin Corr. 1C, H314	Expert judgment
Eye Dam. 1, H318	Expert judgment
Skin Sens. 1, H317	Expert judgment
Aquatic Acute 1, H400 (M=1)	Expert judgment
Aquatic Chronic 1, H410 (M=1)	Expert judgment

[Full text of H-phrases referred to in sections 2 and 3](#)

SECTION 16: Other information

Full text of abbreviated H statements	: H302 H314 H317 H318 H332 H400 H410	Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Harmful if inhaled. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
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Full text of classifications [CLP/GHS]	: Acute Tox. 4, H302 Acute Tox. 4, H332 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Eye Dam. 1, H318 Skin Corr. 1C, H314 Skin Sens. 1, H317 Skin Sens. 1A, H317	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN CORROSION/IRRITATION - Category 1C SKIN SENSITISATION - Category 1 SKIN SENSITISATION - Category 1A
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Notice to reader

The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks, as required by other health and safety legislation.