

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878 - Europe

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

1.1 Product identifier

Product name : Hempafire Pro 400
Product identity : 4349010000, 00137E0D
Product type : Paint. intumescent

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

Field of application : buildings and metal industry.
Identified uses : Industrial applications, Professional applications, Used by spraying.

1.3 Details of the supplier of the safety data sheet

Company details : HEMPEL A/S
Lundtoftegårdsvej 91
DK-2800 Kgs. Lyngby
Denmark
Tel.: + 45 45 93 38 00
hempel@hempel.com
Date of issue : 26 March 2024
Date of previous issue : 10 January 2024.

1.4 Emergency telephone number

Emergency telephone number (with hours of operation)

+45 45 93 38 00 (08.00 - 17.00)
See section 4 First aid measures.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Flam. Liq. 3, H226 FLAMMABLE LIQUIDS
Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION
Carc. 2, H351 CARCINOGENICITY
Repr. 2, H361f TOXIC TO REPRODUCTION

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

2.2 Label elements

Hazard pictograms :



Signal word : Warning
Hazard statements : H226 - Flammable liquid and vapor.
H315 - Causes skin irritation.
H351 - Suspected of causing cancer.
H361f - Suspected of damaging fertility.

Precautionary statements :

Prevention : Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hazardous ingredients : Isomelamine

Supplemental label elements : Contains octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine. May produce an allergic reaction.
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 does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 2: Hazards identification

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	
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥10 - ≤22	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (gases)] = 5000 ppm	[1] [2]
titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2	≥5 - ≤10	Carc. 2, H351 (inhalation)	-	[1] [*]
Isomelamine	REACH #: 01-2119485947-16 EC: 203-615-4 CAS: 108-78-1 Index: 613-345-00-2	≥5 - <10	Carc. 2, H351 Repr. 2, H361f STOT RE 2, H373 (urinary system)	-	[1] [3]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥3 - ≤4.7	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs)	ATE [Inhalation (gases)] = 4500 ppm	[1] [2]
toluene	REACH #: 01-2119471310-51 EC: 203-625-9 CAS: 108-88-3 Index: 601-021-00-3	≤0.3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304	-	[1] [2]
octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	REACH #: 01-2119979085-27 EC: 309-629-8 CAS: 100545-48-0	≤0.3	Skin Sens. 1B, 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 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 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 ≤ 10 µm not bound within a matrix.

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/advise.
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 recognized 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

SECTION 4: First aid measures

Eye contact :	No known significant effects or critical hazards.
Inhalation :	No known significant effects or critical hazards.
Skin contact :	Causes skin irritation.
Ingestion :	No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact :	Adverse symptoms may include the following: pain or irritation watering redness
Inhalation :	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact :	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion :	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Extinguishing media :	Recommended: alcohol resistant foam, CO ₂ , powders, water spray. Not to be used: waterjet.
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5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture :	Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous combustion products :	Decomposition products may include the following materials: carbon oxides nitrogen oxides phosphorus oxides halogenated compounds carbonyl halides 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. Exclude sources of ignition and be aware of explosion hazard. Ventilate the area. Avoid breathing vapor 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 spilled 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).

SECTION 6: Accidental release measures

6.3 Methods and materials for containment and cleaning up

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Use spark-proof tools and explosion-proof equipment. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapors in air and avoid vapor concentrations higher than the occupational exposure limits. In addition, the product should be used only in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, ground drum and connect to receiving container with bonding strap. No sparking tools should be used. Avoid inhalation of vapour, dust and spray mist. Avoid contact with skin and eyes. Eating, drinking and smoking should be prohibited in area where this material is handled, stored and processed. Appropriate personal protective equipment: see Section 8. Always keep in containers made from the same material as the original one.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. Keep out of the reach of children. Keep away from: Oxidizing agents, strong alkalis, strong acids. No smoking. Prevent unauthorized access. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

See separate Product Data Sheet for recommendations or industrial sector specific solutions.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Product/ingredient name	Exposure limit values
xylene	EU OEL (Europe, 1/2022). [xylene, mixed isomers] Absorbed through skin. TWA: 50 ppm 8 hours. TWA: 221 mg/m ³ 8 hours. STEL: 100 ppm 15 minutes. STEL: 442 mg/m ³ 15 minutes.
ethylbenzene	EU OEL (Europe, 1/2022). Absorbed through skin. STEL: 884 mg/m ³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 442 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
toluene	EU OEL (Europe, 1/2022). Absorbed through skin. TWA: 192 mg/m ³ 8 hours. TWA: 50 ppm 8 hours. STEL: 384 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes.

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

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
xylene	DNEL	Long term Inhalation	77 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
Isomelamine	DNEL	Long term Dermal	11.8 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	8.3 mg/m ³	Workers	Systemic
ethylbenzene	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	77 mg/m ³	Workers	Systemic
toluene	DNEL	Long term Dermal	384 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	192 mg/m ³	Workers	Systemic

Predicted effect concentrations

Product/ingredient name	Compartment Detail	Value	Method Detail
xylene	Fresh water	0.327 mg/l	-
	Marine water	0.327 mg/l	-
	Fresh water sediment	12.46 mg/kg	-
	Marine water sediment	12.46 mg/kg	-
	Soil	2.31 mg/kg	-
Isomelamine	Sewage Treatment Plant	6.68 mg/l	-
	Fresh water	0.51 mg/l	Assessment Factors
	Marine water	0.051 mg/l	Assessment Factors
	Sewage Treatment Plant	200 mg/l	Assessment Factors
	Fresh water sediment	2.524 mg/kg dwt	Assessment Factors
ethylbenzene	Marine water sediment	0.252 mg/kg dwt	Assessment Factors
	Soil	0.206 mg/kg dwt	Assessment Factors
	Fresh water	0.1 mg/l	-
	Marine water	0.01 mg/l	-
	Sewage Treatment Plant	9.6 mg/l	-
toluene	Fresh water sediment	13.7 mg/kg	-
	Soil	2.68 mg/kg	-
	Fresh water	0.68 mg/l	-
	Marine water	0.68 mg/l	-
	Sewage Treatment Plant	13.61 mg/l	-
	Fresh water sediment	16.39 mg/kg	-
	Marine water sediment	16.39 mg/kg	-
	Soil	2.89 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.
- 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: nitrile rubber (>0.3 mm)
 Short term exposure: neoprene rubber (>0.1 mm), butyl rubber (>0.5 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.

SECTION 8: Exposure controls/personal protection

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

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : Liquid.
Color : White
Odor : 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: 23°C (73.4°F)
Evaporation rate : Testing not relevant or not possible due to nature of the product.
Flammability : Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Lower and upper explosive (flammable) limits : 0.8 - 6.7 vol %
Vapor pressure : Testing not relevant or not possible due to nature of the product.
Vapor density : Testing not relevant or not possible due to nature of the product.
Specific gravity : 1.34 g/cm³
Partition coefficient (LogKow) : Testing not relevant or not possible due to nature of the product.
Auto-ignition temperature : Lowest known value: 432°C (809.6°F) (xylene).
Decomposition temperature : Testing not relevant or not possible due to nature of the product.
Viscosity : Aspiration hazard (H304) Not classified. Testing not relevant due to nature of the product.
Explosive properties : Testing not relevant or not possible due to nature of the product.
Oxidizing properties : Testing not relevant or not possible due to nature of the product.

9.2 Other information

Solvent(s) % by weight : Weighted average: 26 %
Water % by weight : Weighted average: 0 %
VOC content : 339 g/l (Measured)
Solvent Gas : Weighted average: 0.078 m³/l

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 10: Stability and reactivity

10.5 Incompatible materials

Highly reactive or incompatible with the following materials: oxidizing materials.
Reactive or incompatible with the following materials: reducing materials.

10.6 Hazardous decomposition products

When exposed to high temperatures (i.e. in case of fire) harmful decomposition products may be formed:

Decomposition products may include the following materials: carbon oxides nitrogen oxides phosphorus oxides halogenated compounds carbonyl halides 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.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LC50 Inhalation Vapor	Rat	6350 ppm	4 hours
	LD50 Dermal	Rabbit	>4200 mg/kg	-
titanium dioxide	LD50 Oral	Rat	3523 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	>6.8 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Isomelamine	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	3161 mg/kg	-
ethylbenzene	LD50 Skin	Rabbit	>1000 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
toluene	LD50 Oral	Rat	3500 mg/kg	-
	LC50 Inhalation Vapor	Rat	>20 mg/l	4 hours
	LD50 Oral	Rat	636 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral mg/kg	Dermal mg/kg	Inhalation (gases) ppm	Inhalation (vapors) mg/l	Inhalation (dusts and mists) mg/l
Hempafire Pro 400		5724.9	21017.5	267.1	
xylene	3523	1100	5000		
Isomelamine	3161				
ethylbenzene	3500		4500	11	

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure
xylene	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams
	Skin - Irritant	Rabbit	-	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent
Isomelamine	Eyes - Mild irritant	Rabbit	-	-
ethylbenzene	Eyes - Mild irritant	Rabbit	-	-
	Respiratory - Mild irritant	Rabbit	-	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams
toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams
	Eyes - Mild irritant	Rabbit	-	-
octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	Skin - Mild irritant	Rabbit	-	-

Mutagenic effects

No known significant effects or critical hazards.

Carcinogenicity

Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

SECTION 11: Toxicological information

Reproductive toxicity

Suspected of damaging fertility.

Teratogenic effects

No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
toluene	Category 3		Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Isomelamine	Category 2	-	urinary system
ethylbenzene	Category 2	-	hearing organs
toluene	Category 2	-	-

Aspiration hazard

Product/ingredient name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential chronic health effects

No known significant effects or critical hazards.

Sensitization : Contains octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine. May produce an allergic reaction.

11.2 Information on other hazards

Endocrine disrupting properties : See Section 15 for details.

Other information : No additional known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Do not allow to enter drains or watercourses.

Product/ingredient name	Result	Species	Exposure
Titanium dioxide	Acute LC50 >100 mg/l	Daphnia	48 hours
Isomelamine	Acute LC50 >100 mg/l	Fish	96 hours
	Acute EC50 200 mg/l	Algae	96 hours
	Acute EC50 >2000 mg/l	Daphnia	48 hours
	Acute EC50 >3000 mg/l	Fish	96 hours
ethylbenzene	Chronic NOEC <1000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
toluene	Chronic NOEC <500000 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Chronic NOEC 1000 µg/l Fresh water	Daphnia - Daphnia magna	21 days
octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	Acute EC50 >100 mg/l	Algae	72 hours
	Acute EC50 >10 mg/l	Daphnia	48 hours
	Acute EC50 >10 mg/l	Fish	96 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Xylene	OECD 301F Ready Biodegradability - Manometric Respirometry Test	90 - 98 % - Readily - 28 days	-	-
	-	>60 % - Readily - 28 days	-	-
ethylbenzene	-	>70 % - Readily - 28 days	-	-
toluene	-	100 % - Readily - 14 days	-	-
octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	OECD 301D Ready Biodegradability - Closed Bottle Test	22 % - Not readily - 28 days	-	-

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
Isomelamine	-	-	Not readily
ethylbenzene	-	-	Readily
toluene	-	-	Readily
octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
xylene	3.12	8.1 - 25.9	low
Isomelamine	-1.22	<3.8	low
ethylbenzene	3.6	-	low
toluene	2.73	90	low
octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine	5.86	-	high

12.4 Mobility in soil

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

Mobility : No known data available in our database.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.							

12.6 Endocrine disrupting properties

See Section 15 for details.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Residues of the product is listed as hazardous waste. Dispose of according to all state and local applicable regulations. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Spillage, remains, discarded clothes and similar should be discarded in a fireproof container.

European waste catalogue no. (EWC) is given below.



European waste catalogue (EWC) : 08 01 11*

Packaging

The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

Transport may take place according to national regulation or ADR for transport by road, RID for transport by train, IMDG for transport by sea, IATA for transport by air.

	14.1 UN / ID no.	14.2 Proper shipping name	14.3 Transport hazard class(es)	14.4 PG*	14.5 Env* Additional information
ADR/RID Class	UN1263	PAINT	3 	III	No. <u>Tunnel code</u> (D/E)
IMDG Class	UN1263	PAINT	3 	III	No. <u>Emergency schedules</u> F-E, S-E

SECTION 14: Transport information

IATA Class	UN1263 PAINT	3		III	No. -
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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 authorization - 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
Isomelamine	Substance of equivalent concern for human health	Candidate	D(2022)9120-DC	1/17/2023
Isomelamine	Substance of equivalent concern for environment	Candidate	D(2022)9120-DC	1/17/2023

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

Other EU regulations

Seveso category

This product is controlled under the Seveso III Directive.

Seveso category
P5c: Flammable liquids 2 and 3 not falling under P5a or P5b

15.2 Chemical Safety Assessment

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SECTION 16: Other information

Abbreviations and acronyms :

ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

EUH statement = CLP-specific Hazard statement

RRN = REACH Registration Number

DNEL = Derived No Effect Level

PNEC = Predicted No Effect Concentration

Full text of abbreviated H statements :

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.

SECTION 16: Other information

Full text of classifications [CLP/GHS] :	<input checked="" type="checkbox"/> Acute Tox. 4 <input type="checkbox"/> Asp. Tox. 1 <input type="checkbox"/> Carc. 2 <input type="checkbox"/> Flam. Liq. 2 <input type="checkbox"/> Flam. Liq. 3 <input type="checkbox"/> Repr. 2 <input type="checkbox"/> Skin Irrit. 2 <input type="checkbox"/> Skin Sens. 1B <input type="checkbox"/> STOT RE 2 <input type="checkbox"/> STOT SE 3	ACUTE TOXICITY - Category 4 ASPIRATION HAZARD - Category 1 CARCINOGENICITY - Category 2 FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3 TOXIC TO REPRODUCTION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3
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Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
FLAMMABLE LIQUIDS SKIN CORROSION/IRRITATION CARCINOGENICITY TOXIC TO REPRODUCTION	On basis of test data Calculation method Calculation method Calculation method

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.