

SAFETY DATA SHEET



Hardtop One

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

1.1 Product identifier

Product name : Hardtop One
Product code : 12020
Product description : Paint.
Product type : Liquid.
Other means of identification : Not available.

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

Use in coatings - Industrial use
Use in coatings - Professional use

1.3 Details of the supplier of the safety data sheet

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P.O.Box 2021
3202 Sandefjord
Norway

Tel: + 47 33 45 70 00
Fax: +47 33 45 72 42
E-mail: SDSJotun@jotun.no

National contact

Jotun Paints Europe (Ltd).
Unit K7, Marina Commercial Park
Centre Park Road
Cork
Ireland

Tel: +353 214 965955
Fax: +353 214 965992

SDSJotun@jotun.com

1.4 Emergency telephone number

Poisons Information Centre of Ireland: +353 1 809 3000 (8am-10pm, 7 days a week)

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]

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SECTION 2: Hazards identification

Flam. Liq. 3, H226
 Skin Irrit. 2, H315
 Eye Dam. 1, H318
 Skin Sens. 1, H317
 Repr. 1B, H360D
 STOT RE 2, H373 (central nervous system (CNS))
 Aquatic Chronic 3, H412

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

Hazard pictograms



Signal word

: Danger.

Hazard statements

: H226 - Flammable liquid and vapour.
 H315 - Causes skin irritation.
 H317 - May cause an allergic skin reaction.
 H318 - Causes serious eye damage.
 H360D - May damage the unborn child.
 H373 - May cause damage to organs through prolonged or repeated exposure.
 (central nervous system (CNS))
 H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

General

: Not applicable.

Prevention

: P201 - Obtain special instructions before use.
 P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P273 - Avoid release to the environment.
 P260 - Do not breathe vapour or spray.

Response

: P308 + P313 - IF exposed or concerned: Get medical advice or attention.
 P362 + P364 - Take off contaminated clothing and wash it before reuse.
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
 P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage

: Not applicable.

Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients

: Xylene
 hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)
 1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]-
 butan-1-ol
 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with butyl
 2-propenoate, compd. with polyethylene glycol hydrogen maleate C9-11-alkyl ethers
 dioctyltin dilaurate
 n-butyl methacrylate
 2-hydroxyethyl acrylate

Supplemental label elements

: EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed.
 Do not breathe spray or mist.

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SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Special packaging requirements

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

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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	Specific Conc. Limits, M-factors and ATEs	Type
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≤10	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	REACH #: 01-2119458049-33 EC: 919-446-0 CAS: -	≤5	Flam. Liq. 3, H226 STOT SE 3, H336 STOT RE 1, H372 (central nervous system (CNS)) (inhalation) Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[1]
1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]-	EC: 221-336-6 CAS: 3069-29-2	≤5	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317	ATE [Oral] = 500 mg/kg	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≤3	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]

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SECTION 3: Composition/information on ingredients

hydrocarbons, C9, aromatics	REACH #: 01-2119455851-35 EC: 918-688-5 CAS: 128601-23-0	≤3	Flam. Liq. 3, H226 STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 EUH066	-	[1]
butan-1-ol	REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6	≤2.2	Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	ATE [Oral] = 500 mg/kg	[1] [2]
2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with butyl 2-propenoate, compd. with polyethylene glycol hydrogen maleate C9-11-alkyl ethers	CAS: 1259547-09-5	<1	Skin Sens. 1, H317 Aquatic Chronic 2, H411	-	[1]
dioctyltin dilaurate	EC: 222-883-3 CAS: 3648-18-8	<1	Repr. 1B, H360D STOT RE 1, H372 (immune system)	-	[1] [2]
n-butyl methacrylate	REACH #: 01-2119486394-28 EC: 202-615-1 CAS: 97-88-1 Index: 607-033-00-5	≤0.3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335	-	[1]
2-hydroxyethyl acrylate	EC: 212-454-9 CAS: 818-61-1 Index: 607-072-00-8	<0.1	Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400	ATE [Dermal] = 298 mg/kg Skin Sens. 1, H317: C ≥ 0.2% M [Acute] = 1	[1]
Oleic acid, compound	EC: 251-846-4 CAS: 34140-91-5	≤0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	M [Acute] = 10	[1]

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

This mixture contains ≥ 1% of titanium dioxide. The Annex VI classification of titanium dioxide does not apply to this mixture according to Note 10.

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

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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.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced foetal weight
increase in foetal deaths
skeletal malformations

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)

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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 : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.

Hazardous combustion products : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.

Special protective equipment for fire-fighters : Appropriate breathing apparatus may be required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.

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

: Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

: 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). Preferably clean with a detergent. Avoid using solvents.

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. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

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.

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SECTION 7: Handling and storage

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.

Information on fire and explosion protection

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

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. 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.

Seveso Directive - Reporting thresholds**Danger criteria**

Category	Notification and MAPP threshold	Safety report threshold
P5c	5000 tonne	50000 tonne

See Technical Data Sheet / packaging for further information.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters**Occupational exposure limits**

Product/ingredient name	Exposure limit values
xylene	EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-, p- or mixed isomers] Absorbed through skin. STEL: 441 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
ethylbenzene	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 552 mg/m ³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours. TWA: 441 mg/m ³ 8 hours.
butan-1-ol	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 154 mg/m ³ 15 minutes. STEL: 50 ppm 15 minutes.

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SECTION 8: Exposure controls/personal protection

dioctyltin dilaurate	EH40/2005 WELs (United Kingdom (UK), 1/2020). [tin compounds, organic, except cyhexatin (ISO)] Absorbed through skin. STEL: 0.2 mg/m ³ , (as Sn) 15 minutes. TWA: 0.1 mg/m ³ , (as Sn) 8 hours.
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Product/ingredient name

Exposure indices

Recommended monitoring procedures : 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

Product/ingredient name	Type	Exposure	Value	Population	Effects
xylene	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Local
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	260 mg/m ³	General population	Local
	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Systemic
	hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	DNEL	Long term Inhalation	330 mg/m ³	Workers
DNEL		Long term Dermal	44 mg/kg bw/day	Workers	Systemic
DNEL		Long term Inhalation	71 mg/m ³	General population	Systemic
DNEL		Long term Dermal	26 mg/kg bw/day	General population	Systemic
1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]-	DNEL	Long term Oral	26 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	1.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	1.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3 mg/kg	Workers	Systemic

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SECTION 8: Exposure controls/personal protection

ethylbenzene	DNEL	Long term Inhalation	bw/day 5.2 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	21.1 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	26400 mg/m ³	General population	Systemic	
	DMEL	Long term Inhalation	442 mg/m ³	Workers	Local	
	DMEL	Short term Inhalation	884 mg/m ³	Workers	Systemic	
	DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	15 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	77 mg/m ³	Workers	Systemic	
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	293 mg/m ³	Workers	Local	
hydrocarbons, C9, aromatics	DNEL	Long term Dermal	12.5 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	151 mg/m ³	Workers	Systemic	
	DNEL	Long term Dermal	7.5 mg/kg bw/day	General population [Consumers]	Systemic	
	DNEL	Long term Inhalation	32 mg/m ³	General population [Consumers]	Systemic	
	DNEL	Long term Oral	7.5 mg/kg bw/day	General population [Consumers]	Systemic	
	DNEL	Long term Inhalation	0.41 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	1.9 mg/m ³	Workers	Systemic	
	DNEL	Long term Inhalation	178.57 mg/m ³	General population	Local	
	DNEL	Short term Inhalation	640 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	837.5 mg/m ³	Workers	Local	
butan-1-ol	DNEL	Short term Inhalation	1066.67 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	1152 mg/m ³	General population	Systemic	
	DNEL	Short term Inhalation	1286.4 mg/m ³	Workers	Systemic	
	DNEL	Long term Oral	1.5625 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	3.125 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	55.357 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	155 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	310 mg/m ³	Workers	Local	
	dioctyltin dilaurate	DNEL	Long term Oral	0.0005 mg/kg bw/day	General population	Systemic
		DNEL	Long term	0.0009 mg/	General	Systemic

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SECTION 8: Exposure controls/personal protection

n-butyl methacrylate	DNEL	Inhalation Long term	m ³ 0.0035 mg/ m ³	population Workers	Systemic
	DNEL	Inhalation Long term Dermal	3 mg/kg bw/day	General population	Systemic
	DNEL	Dermal Long term Dermal	5 mg/kg bw/day	Workers	Systemic
	DNEL	Inhalation Long term	66.5 mg/m ³	General population	Systemic
	DNEL	Inhalation Long term	366.4 mg/ m ³	General population	Local
	DNEL	Inhalation Long term	409 mg/m ³	Workers	Local
2-hydroxyethyl acrylate	DNEL	Inhalation Long term	415.9 mg/ m ³	Workers	Systemic
	DNEL	Inhalation Long term	2.4 mg/m ³	Workers	Local
Oleic acid, compound	DNEL	Oral Long term Oral	5 µg/kg bw/ day	General population	Systemic
	DNEL	Dermal Long term Dermal	5 µg/kg bw/ day	General population	Systemic
	DNEL	Dermal Long term Dermal	14 µg/kg bw/day	Workers	Systemic
	DNEL	Inhalation Long term	17.4 µg/m ³	General population	Systemic
	DNEL	Inhalation Long term	98.4 µg/m ³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
xylene	Fresh water	0.327 mg/l	-
	Marine	0.327 mg/l	-
	Sewage Treatment Plant	6.58 mg/l	-
	Fresh water sediment	12.46 mg/kg dwt	-
	Marine water sediment	12.46 mg/kg dwt	-
	Soil	2.31 mg/kg dwt	-
ethylbenzene	Fresh water	0.1 mg/l	-
	Marine	0.01 mg/l	-
	Sewage Treatment Plant	9.6 mg/l	-
	Fresh water sediment	13.7 mg/kg dwt	-
	Soil	2.68 mg/kg dwt	-
	Secondary Poisoning	20 mg/kg	-
butan-1-ol	Fresh water	0.082 mg/l	-
	Marine	0.0082 mg/l	-
	Sewage Treatment Plant	2476 mg/l	-
	Fresh water sediment	0.178 mg/kg dwt	-
	Marine water sediment	0.0178 mg/kg dwt	-
	Soil	0.015 mg/kg dwt	-

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

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SECTION 8: Exposure controls/personal protection

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.

Eye/face protection : Safety eyewear complying to ISO 16321-1:2022 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.

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

Wear suitable gloves tested to ISO 374-1:2016.

Not recommended, gloves(breakthrough time) < 1 hour: butyl rubber (> 0.4 mm)

May be used, gloves(breakthrough time) 4 - 8 hours: fluor rubber (> 0.35 mm), Viton® (> 0.7 mm), neoprene (> 0.35 mm), PVC (> 0.5 mm)

Recommended, gloves(breakthrough time) > 8 hours: 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm), polyvinyl alcohol (PVA) (> 0.3 mm), nitrile rubber (> 0.75 mm)

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

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 : Use chemical-resistant protective suit / disposable overall.

Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

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 : If workers are exposed to concentrations above the exposure limit, they must use a respirator according to EN 140. Use respiratory mask with charcoal and dust filter when spraying this product, according to EN 14387 (as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.

Environmental exposure controls : Do not allow to enter drains or watercourses.

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SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties**Appearance**

Physical state	: Liquid.
Colour	: Black, Blue., Green., Grey, MCI Base 1, MCI Base 2, MCI Base 3, MCI Base 5, Orange, Red, White., Yellow.
Odour	: Characteristic.
Odour threshold	: Not applicable.
Melting point/freezing point	: Not applicable.
Initial boiling point and boiling range	: Lowest known value: 119°C (246.2°F) (butan-1-ol). Weighted average: 165.49°C (329.9°F)
Flammability	: Not applicable.
Lower and upper explosion limit	: <input checked="" type="checkbox"/> Greatest known range: Lower: 1.4% Upper: 11.3% (butan-1-ol)
Flash point	: Closed cup: 28°C
Auto-ignition temperature	: Lowest known value: 280 to 470°C (536 to 878°F) (hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)).
Decomposition temperature	: Not available.
pH	: Not applicable.
Viscosity	: Kinematic (40°C): >20.5 mm ² /s
Solubility in water	: cold water Not soluble hot water Not soluble
Partition coefficient: n-octanol/ water	: Not available.
Vapour pressure	: Highest known value: 2.7 kPa (20.3 mm Hg) (at 20°C) (hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)). Weighted average: 1.14 kPa (8.55 mm Hg) (at 20°C)
Evaporation rate	: Highest known value: 0.84 (ethylbenzene) Weighted average: 0.54 compared with butyl acetate
Density	: 1.245 to 1.444 g/cm ³
Vapour density	: Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.58 (Air = 1)
Explosive properties	: Not available.
Oxidising properties	: Not available.
Particle characteristics	
Median particle size	: Not applicable.

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	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

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SECTION 10: Stability and reactivity

In contact with water, the product hydrolyses; during curing, releases Methanol. If the product is contaminated with water during production, transportation or storage, this may effect both flashpoint and hazard potential.

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Vapour	Rat	11 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDL ₀ Dermal	Rabbit	4300 mg/kg	-
1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]	LD50 Oral	Mammal - species unspecified	200 mg/kg	-
- ethylbenzene	LC50 Inhalation Vapour	Rat - Male	11 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
butan-1-ol	LD50 Oral	Rat	790 mg/kg	-
n-butyl methacrylate	LD50 Oral	Rat	16 g/kg	-
2-hydroxyethyl acrylate	LD50 Dermal	Rabbit	298 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Hardtop One	10999.7	17099.8	N/A	128.2	N/A
xylene	4300	1100	N/A	11	N/A
1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]-	500	N/A	N/A	N/A	N/A
ethylbenzene	3500	N/A	N/A	11	N/A
butan-1-ol	500	N/A	N/A	N/A	N/A
n-butyl methacrylate	16000	N/A	N/A	N/A	N/A
2-hydroxyethyl acrylate	N/A	298	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]	Eyes - Severe irritant	Mammal - species unspecified	-	-	-
-	Skin - Moderate irritant	Mammal - species unspecified	-	-	-
n-butyl methacrylate	Eyes - Mild irritant	Mammal - species unspecified	-	-	-
	Skin - Mild irritant	Rabbit	-	500 microliters	-

Sensitisation

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SECTION 11: Toxicological information

Product/ingredient name	Route of exposure	Species	Result
1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]	skin	Mammal - species unspecified	Sensitising
- 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with butyl 2-propenoate, compd. with polyethylene glycol hydrogen maleate C9-11-alkyl ethers n-butyl methacrylate	skin	Mammal - species unspecified	Sensitising
2-hydroxyethyl acrylate	skin	Mammal - species unspecified	Sensitising

Mutagenicity

No known significant effects or critical hazards.

Carcinogenicity

No known significant effects or critical hazards.

Reproductive toxicity

Developmental effects : May damage the unborn child.

Fertility effects : No known significant effects or critical hazards.

Teratogenicity

May damage the unborn child.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation Narcotic effects
hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	Category 3	-	Respiratory tract irritation Narcotic effects
hydrocarbons, C9, aromatics	Category 3	-	Respiratory tract irritation Narcotic effects
butan-1-ol	Category 3 Category 3	-	Respiratory tract irritation Narcotic effects
n-butyl methacrylate	Category 3 Category 3	-	Respiratory tract irritation Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	Category 1	inhalation	central nervous system (CNS)
ethylbenzene	Category 2	-	hearing organs
dioctyltin dilaurate	Category 1	-	immune system
Oleic acid, compound	Category 2	-	-

Aspiration hazard

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SECTION 11: Toxicological information

Product/ingredient name	Result
xylene hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1
ethylbenzene hydrocarbons, C9, aromatics	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

11.2 Information on other hazards**11.2.1 Endocrine disrupting properties**

Not available.

11.2.2 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
xylene hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 <10 mg/l	Daphnia	48 hours
ethylbenzene	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours
	Acute EC50 7700 µg/l Marine water	Algae - Skeletonema costatum	96 hours
hydrocarbons, C9, aromatics	Acute EC50 2.93 mg/l	Daphnia	48 hours
	Acute LC50 4.2 mg/l	Fish	96 hours
	Acute EC50 <10 mg/l	Daphnia	48 hours
n-butyl methacrylate	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours
	Chronic NOEC 2.6 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
2-hydroxyethyl acrylate	Acute EC50 0.78 mg/l	Crustaceans - Daphnia magna	48 hours

Conclusion/Summary : This material is harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	-	-	Readily
	-	-	Not readily
ethylbenzene hydrocarbons, C9, aromatics	-	-	Readily
	-	-	Not readily

12.3 Bioaccumulative potential

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SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
xylene	3.12	8.1 to 25.9	low
hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	-	10 to 2500	high
ethylbenzene	3.6	-	low
hydrocarbons, C9, aromatics	-	10 to 2500	high
butan-1-ol	1	-	low
dioctyltin dilaurate	-	<100	low
n-butyl methacrylate	2.99	-	low
2-hydroxyethyl acrylate	-0.17	-	low

12.4 Mobility in soil

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

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

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:

Waste code	Waste designation
08 01 11*	Waste paint and varnish containing organic solvents or other dangerous 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.

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SECTION 13: Disposal considerations

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.

Type of packaging	European waste catalogue (EWC)
CEPE Guidelines	15 01 10* packaging containing residues of or contaminated by hazardous substances

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. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN1263	UN1263	UN1263	UN1263
14.2 UN proper shipping name	Paint	Paint	Paint	Paint
14.3 Transport hazard class(es)	3 	3 	3 	3 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADR/RID : **Hazard identification number 30**
Tunnel code (D/E)
 ADR/RID: Viscous substance. Not goods of class 3, ref. 2.2.3.1.5 (only applicable to receptacles < 450 litre capacity).

ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.

IMDG : **Emergency schedules F-E, S-E**
 IMDG: Viscous substance. Transport in accordance with 2.3.2.5 of the IMDG Code (only applicable to receptacles < 450 litre capacity).

UN : UN: Viscous substance. Not goods of class 3, ref. 2.3.2.5 (only applicable to receptacles < 450 litre capacity).

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 available.

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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

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Toxic to reproduction	dioctyltin dilaurate	Candidate	D(2020) 9139-DC	19.01.2021

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Other EU regulations

VOC : The provisions of Directive 2004/42/EC on VOC apply to this product. Refer to the product label and/or technical data sheet for further information.

VOC for Ready-for-Use Mixture : Not available.

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Annex	Ingredient name	Status
Annex I - Part 1	dioctyltin dilaurate	Listed

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product may add to the calculation for determining whether a site is within the scope of the Seveso Directive on major accident hazards.

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.

International regulations**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

Montreal Protocol

Not listed.

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SECTION 15: Regulatory information

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

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
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- SGG = Segregation Group
- vPvB = Very Persistent and Very Bioaccumulative

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

Classification	Justification
Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360D STOT RE 2, H373 (central nervous system (CNS)) Aquatic Chronic 3, H412	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

*Hardtop One***SECTION 16: Other information**[Full text of classifications \[CLP/GHS\]](#)

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

Date of printing : 07.05.2024**Date of issue/ Date of revision** : 07.05.2024**Date of previous issue** : 27.03.2023**Version** : 2**Notice to reader**

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