Hardtop Optima Comp A

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

1.1 Product identifier

Product name : Hardtop Optima Comp A

Product code : 9600

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

Identified uses

Uses in Coatings - Industrial use

Uses in Coatings - Professional use

1.3 Details of the supplier of the safety data sheet

Jotun Paints (Europe) Ltd.
Stather Road
Flixborough, Scunthorpe
North Lincolnshire
DN15 8RR
England

Tel: +44 17 24 40 00 00
Fax: +44 17 24 40 01 00
SDSJotun@jotun.com

1.4 Emergency telephone number

Contact NHS; phone 111.

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
Eye Dam. 1, H318
STOT RE 2, H373
Aquatic Chronic 3, H412

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification : R10
Xn; R20
R52/53

Physical/chemical hazards : Flammable.

Human health hazards : Harmful by inhalation.

Environmental hazards : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 16 for the full text of the R phrases or H statements declared above.

SECTION 2: Hazards identification

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

2.2 Label elements

Hazard pictograms :



Signal word : Danger.

Hazard statements : Flammable liquid and vapour.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Not applicable.

Prevention : Wear eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment. Do not breathe vapour or spray.

Response : Get medical attention if you feel unwell. IF IN EYES: Immediately call a POISON CENTER or physician.

Storage : Keep cool.

Disposal : Not applicable.

Hazardous ingredients : [3-(2,3-epoxypropoxy)propyl]trimethoxysilane
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)

Supplemental label elements : Contains epoxy constituents. Contains 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane. May produce an allergic reaction.

Additional information : Not applicable.

2.3 Other hazards

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

SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification 67/548/EEC	Classification Regulation (EC) No. 1272/2008 [CLP]	Type	Notes
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥5 - <10	R10 Xn; R20/21 Xi; R38	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	[1] [2]	C
[3-(2,3-epoxypropoxy) propyl] trimethoxysilane	EC: 219-784-2 CAS: 2530-83-8	≥3 - <5	Xi; R41	Eye Dam. 1, H318	[1]	-
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	REACH #: 01-2119458049-33 EC: 265-185-4 CAS: 64742-82-1 Index: 649-330-00-2	≥3 - <5	R10 Xn; R48/20, R65 R66, R67 N; R51/53	Flam. Liq. 3, H226 STOT SE 3, H336 STOT RE 1, H372 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]	H-P
ethylbenzene	REACH #: 01-2119489370-35	≥1 - <3	F; R11	Flam. Liq. 2, H225	[1] [2]	-

SECTION 3: Composition/information on ingredients

4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2, 3-epoxypropane	EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4 EC: 500-070-7 CAS: 30583-72-3	≥0,3 - <1	Xn; R20, R48/20, R65 Xi; R36/38 R43 **See Section 16 for the full text of the R-phrases declared above.**	Acute Tox. 4, H332 STOT RE 2, H373 (ears) Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 **See Section 16 for the full text of the H statements declared above.**	[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 or vPvBs 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

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.

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.

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.

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

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

SECTION 4: First aid measures

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 : 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

Suitable extinguishing media : Recommended: alcohol-resistant foam, CO_2, 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 : Flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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.

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. 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".

SECTION 6: Accidental release measures

6.2 Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. 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. 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.
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.

7.3 Specific end use(s)

SECTION 7: Handling and storage

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. 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), 12/2011). Absorbed through skin.** STEL: 441 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m³ 8 hours. TWA: 50 ppm 8 hours.
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	**EH40-WEL (United Kingdom (UK), 1/2005).** STEL: 850 mg/m³ 15 minutes. Form: All forms STEL: 150 ppm 15 minutes. Form: All forms TWA: 566 mg/m³ 8 hours. Form: All forms TWA: 100 ppm 8 hours. Form: All forms
ethylbenzene	**EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.** STEL: 552 mg/m³ 15 minutes. STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours. TWA: 441 mg/m³ 8 hours.

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 no effect levels

Product/ingredient name	Type	Exposure	Value	Population	Effects
xylene	DNEL	Short term Inhalation	289 mg/m³	Workers	Systemic
	DNEL	Short term Inhalation	289 mg/m³	Workers	Local
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	77 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	108 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	14,8 mg/m³	Consumers	Systemic
	DNEL	Long term Oral	1,6 mg/kg bw/day	Consumers	Systemic
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	DNEL	Long term Inhalation	330 mg/m³	Workers	Systemic
	DNEL	Long term Dermal	44 mg/kg	Workers	Systemic

SECTION 8: Exposure controls/personal protection

			bw/day		
	DNEL	Long term Inhalation	71 mg/m³	Consumers	Systemic
	DNEL	Long term Dermal	26 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	26 mg/kg bw/day	Consumers	Systemic
ethylbenzene	DNEL	Short term Inhalation	293 mg/m³	Workers	Local
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	77 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	15 mg/m³	Consumers	Systemic
	DNEL	Long term Oral	1,6 mg/kg bw/day	Consumers	Systemic

Predicted no effect concentrations

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
xylene	PNEC	Fresh water	0,327 mg/l	-
	PNEC	Marine	0,327 mg/l	-
	PNEC	Sewage Treatment Plant	6,58 mg/l	-
	PNEC	Fresh water sediment	12,46 mg/kg dwt	-
	PNEC	Marine water sediment	12,46 mg/kg dwt	-
	PNEC	Soil	2,31 mg/kg dwt	-
ethylbenzene	PNEC	Fresh water	0,1 mg/l	-
	PNEC	Marine	0,01 mg/l	-
	PNEC	Sewage Treatment Plant	9,6 mg/l	-
	PNEC	Fresh water sediment	13,7 mg/kg dwt	-
	PNEC	Soil	2,68 mg/kg dwt	-
	PNEC	Secondary Poisoning	20 mg/kg	-

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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.

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.

SECTION 8: Exposure controls/personal protection

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.

Not recommended, gloves(breakthrough time) < 1 hour: neoprene, butyl rubber
May be used, gloves(breakthrough time) 4 - 8 hours: PVC
Recommended, gloves(breakthrough time) > 8 hours: nitrile rubber, 4H, Teflon, polyvinyl alcohol (PVA)

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 : 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.

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 appropriate, certified respirators. Use respiratory mask with charcoal and dust filter when spraying this product.(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 : 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.

Colour : Various

Odour : Characteristic.

Odour threshold : Not available.

pH : Not applicable.

Melting point/freezing point : Not applicable.

Initial boiling point and boiling range : Lowest known value: 136°C (276.8°F) (ethylbenzene). Weighted average: 149. 68°C (301.4°F)

Flash point : Closed cup: 28°C

Evaporation rate : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.55compared with butyl acetate

Flammability (solid, gas) : Not applicable.

Burning time : Not applicable.

Burning rate : Not applicable.

Upper/lower flammability or explosive limits : 0.6 - 7%

Vapour pressure : Highest known value: 2.7 kPa (20.3 mm Hg) (at 20°C) (Naphtha (petroleum), hydrodesulfurized heavy). Weighted average: 1.45 kPa (10.88 mm Hg) (at 20°C)

Vapour density : Highest known value: 3.7 (Air = 1) (xylene). Weighted average: 3.7 (Air = 1)

SECTION 9: Physical and chemical properties

Relative density	:	1.5 g/cm³
Solubility(ies)	:	Insoluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/ water	:	Not available.
Auto-ignition temperature	:	Lowest known value: >200°C (>392°F) (Naphtha (petroleum), hydrodesulfurized heavy).
Decomposition temperature	:	Not available.
Viscosity	:	Dynamic: Highest known value: 0.581 cP (xylene) Kinematic: Highest known value: 0.773 cSt (ethylbenzene) Kinematic (40C): Highest known value: 0.93 cSt (Naphtha (petroleum), hydrodesulfurized heavy) Weighted average: 0.86 cSt
Explosive properties	:	Not available.
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	:	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 pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
10.5 Incompatible materials	:	Reactive or incompatible with the following materials: oxidizing materials
10.6 Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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 toxicological effects

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 2 and 15 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. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. 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. Swallowing may cause nausea, diarrhoea, vomiting, gastro-intestinal irritation and chemical pneumonia.

Based on the properties of the epoxy constituent(s) and considering toxicological data on similar mixtures, this mixture may be a skin sensitiser and an irritant. It contains low molecular weight epoxy constituents which are irritating to eyes, mucous membrane and skin. Repeated skin contact may lead to irritation and to sensitisation, possibly with cross-sensitisation to other epoxies. Skin contact with the mixture and exposure to spray mist and vapour should be avoided.

Contains 4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane. May produce an allergic reaction.

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
ethylbenzene	LC50 Inhalation Gas.	Rabbit	4000 ppm	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Acute toxicity estimates

Route	ATE value
Dermal	20164,3 mg/kg
Inhalation (vapours)	167,4 mg/l

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	Category 1	Not determined	Not determined
ethylbenzene	Category 2	Not determined	ears

Aspiration hazard

Product/ingredient name	Result
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	Acute EC50 <10 mg/l	Daphnia	48 hours
	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours
ethylbenzene	Acute EC50 7,2 mg/l	Algae	48 hours
	Acute EC50 2,93 mg/l	Daphnia	48 hours
	Acute LC50 4,2 mg/l	Fish	96 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	-	-	Readily
[3-(2,3-epoxypropoxy)propyl] trimethoxysilane	-	-	Not readily
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	-	-	Not readily
ethylbenzene	-	-	Readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
xylene	3,12	8.1 to 25.9	low
Naphtha (petroleum), hydrodesulfurized heavy (<0.1% Benzene)	-	10 to 2500	high
ethylbenzene	3,15	-	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

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. 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

Do not allow to enter drains or watercourses. Material and/or container must be disposed of as hazardous waste.

European waste catalogue (EWC) : 08 01 11* Waste paint and varnish containing organic solvents or other dangerous substances If this product is mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information, contact your local waste authority.

SECTION 14: Transport information

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.

Transport in accordance with ADR/RID, IMDG/IMO and ICAO/IATA and national regulation.

International transport regulations

14.1 UN number : 1263

14.2 UN proper shipping name : Paint

14.3 Transport hazard class(es) : 3



14.4 Packing group : III

14.5 Environmental hazards : No.

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.

Additional information

ADR / RID : Tunnel restriction code: (D/E)
Hazard identification number: 30
Special provisions: 640E

SECTION 14: Transport information

IMDG : **Emergency schedules (EmS)**
F-E, S-E

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

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

Europe inventory : Not determined.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

Integrated pollution prevention and control list (IPPC) - Air : Not listed

Integrated pollution prevention and control list (IPPC) - Water : Not listed

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

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]
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number

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

SECTION 16: Other information

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Eye Dam. 1, H318	Calculation method
STOT RE 2, H373	Calculation method
Aquatic Chronic 3, H412	Expert judgment

Full text of abbreviated H statements :

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 (dermal) Harmful in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 (inhalation) Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H373 (ears) May cause damage to organs through prolonged or repeated exposure. (ears)
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS] :

Acute Tox. 4, H312	ACUTE TOXICITY (dermal) - Category 4
Acute Tox. 4, H332	ACUTE TOXICITY (inhalation) - Category 4
Aquatic Chronic 2, H411	LONG-TERM AQUATIC HAZARD - Category 2
Aquatic Chronic 3, H412	LONG-TERM AQUATIC HAZARD - Category 3
Asp. Tox. 1, H304	ASPIRATION HAZARD - Category 1
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2, H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Flam. Liq. 2, H225	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3, H226	FLAMMABLE LIQUIDS - Category 3
Skin Irrit. 2, H315	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
STOT RE 1, H372	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
STOT RE 2, H373	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
STOT RE 2, H373 (ears)	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (ears) - Category 2
STOT SE 3, H336	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

Full text of abbreviated R phrases :

R11- Highly flammable.
R10- Flammable.
R20- Harmful by inhalation.
R20/21- Harmful by inhalation and in contact with skin.
R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R65- Harmful: may cause lung damage if swallowed.
R41- Risk of serious damage to eyes.
R38- Irritating to skin.
R36/38- Irritating to eyes and skin.
R43- May cause sensitisation by skin contact.
R66- Repeated exposure may cause skin dryness or cracking.
R67- Vapours may cause drowsiness and dizziness.
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications [DSD/DPD] :

F - Highly flammable
Xn - Harmful
Xi - Irritant
N - Dangerous for the environment

Date of printing : 23.03.2015.

SECTION 16: Other information

Date of issue/ Date of revision : 23.03.2015.

Date of previous issue : 30.01.2015.

Version : 3.01

Notice to reader

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.