

# SAFETY DATA SHEET



## Hardtop Optima Comp A

### Section 1. Identification

**GHS product identifier** : Hardtop Optima Comp A  
**Product code** : 9600  
**Other means of identification** : Not available.  
**Product type** : Liquid.  
**Product description** : Paint.

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

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

**Supplier's details** : 佐敦涂料（张家港）有限公司  
江苏省张家港保税区扬子江化学工业园长江路15号 215634  
电话: +86 512 58937988  
传真: +86 512 58937986

Jotun Coatings (Zhangjiagang) Co. Ltd  
No.15 Changjiang Road Jiangsu Yangtze River International Chemical Industry Park,  
Zhangjiagang Free Trade Zone, Jiangsu Province 215634  
Tel: +86 512 58937988  
Fax: +86 512 58937986

Jotun Paints (Malaysia) Sdn Bhd, Lot 7 Persiaran Perusahaan, Section 23  
40300 SHAH ALAM, Selangor Darul Ehsan  
Malaysia  
Tel: +603 51235500  
Fax: +603 51235599

SDSJotun@jotun.com

**Emergency telephone number (with hours of operation)** : Jotun Coatings (Taiwan) Ltd. Co. Tel: +886 2 87705061

### Section 2. Hazards identification

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 3  
SKIN CORROSION/IRRITATION - Category 3  
SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1  
SKIN SENSITISATION - Category 1  
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2  
AQUATIC TOXICITY (CHRONIC) - Category 3

#### GHS label elements

## Section 2. Hazards identification

### Hazard pictograms



### Signal word

: Danger.

### Hazard statements

: H226 - Flammable liquid and vapour.  
 H316 - Causes mild skin irritation.  
 H317 - May cause an allergic skin reaction.  
 H318 - Causes serious eye damage.  
 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

#### Prevention

: P280 - Wear protective gloves. Wear eye or face 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

: P314 - Get medical advice/attention if you feel unwell.  
 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

: P403 + P235 - Store in a well-ventilated place. Keep cool.

#### Disposal

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

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

## Section 3. Composition/information on ingredients

### Substance/mixture

: Mixture

### Other means of identification

: Not available.

Product name	% (w/w)	CAS number	Type
xylene	<10	1330-20-7	[1] [2]
silane, trimethoxy[3-(oxiranyl-methoxy)propyl]-	≤5	2530-83-8	[1]
hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	≤5	64742-82-1	[1]
ethylbenzene	≤3	100-41-4	[1] [2]
octamethylcyclotetrasiloxane	≤0.088	556-67-2	[1]
maleic anhydride	≤0.1	108-31-6	[1] [2]

## Section 3. Composition/information on ingredients

物品名稱	% (w/w)	化學文摘社登記號碼(CAS No.)	類型
二甲苯	<10	1330-20-7	[1] [2]
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	≤5	2530-83-8	[1]
加氫的石油磺化重石腦油 小于0.1% 苯	≤5	64742-82-1	[1]
苯乙烷	≤3	100-41-4	[1] [2]
octamethylcyclotetrasiloxane	≤0.088	556-67-2	[1]
順-丁烯二酐	≤0.1	108-31-6	[1] [2]

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

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

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. 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.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.

## Section 4. First aid measures

**Skin contact** : Causes mild skin irritation. May cause an allergic skin reaction.

**Ingestion** : No known significant effects or critical hazards.

### Over-exposure signs/symptoms

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

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur

**Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Indication of immediate medical attention and special treatment needed, if necessary

**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.

**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.

See toxicological information (Section 11)

## Section 5. Firefighting measures

### Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : Flammable liquid and vapour. 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. 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  
nitrogen oxides  
metal oxide/oxides

**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.

## Section 6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures** : 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.
- 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.
- 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 (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
xylene	<b>TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018). [xylenes]</b> STEL: 542.5 mg/m <sup>3</sup> 15 minutes. STEL: 125 ppm 15 minutes. TWA: 434 mg/m <sup>3</sup> 8 hours. TWA: 100 ppm 8 hours.
ethylbenzene	<b>TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018).</b> STEL: 125 ppm 15 minutes. STEL: 542.5 mg/m <sup>3</sup> 15 minutes. TWA: 100 ppm 8 hours. TWA: 434 mg/m <sup>3</sup> 8 hours.
maleic anhydride	<b>TW Ministry of Labor, labor permissible workplace exposure standards, allowable concentration (Taiwan, 3/2018).</b> STEL: 0.75 ppm 15 minutes. TWA: 1 mg/m <sup>3</sup> 8 hours. TWA: 0.25 ppm 8 hours. STEL: 3 mg/m <sup>3</sup> 15 minutes.

#### Biological exposure indices

No exposure indices known.

**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

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

**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. 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: neoprene (> 0.35 mm), PVC (> 0.5 mm) Recommended, gloves(breakthrough time) > 8 hours: nitrile rubber (> 0.75 mm), 4H/ Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm), polyvinyl alcohol (PVA) (> 0.3 mm)

## Section 8. Exposure controls/personal protection

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.

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

## Section 9. Physical and chemical properties and safety characteristics

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

### Appearance

- Physical state** : Liquid.
- Colour** : Blue., Green., Grey, MCI Base 1, MCI Base 2, MCI Base 3, MCI Base 5, MCI Base 6, Off-white., Orange, Red, White., Yellow.

**Odour** : Characteristic.

**Odour threshold** : Not available.

**pH** : Not applicable.

**Melting point/freezing point** : Not applicable.

**Boiling point, initial boiling point, and boiling range** : Not available.

**Flash point** : Closed cup: 28°C (82.4°F)

**Flammability** : Not available.

**Lower and upper explosion limit/flammability limit** : Greatest known range: Lower: 1.4% Upper: 7.6% (hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%))

**Vapour pressure** :

## Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Vapour Pressure at 20 °C			Vapour pressure at 50 °C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
methanol	126.96329	16.9				
Toluene	23.17	3.1				
hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	20.25	2.7				
ethylbenzene	9.30076	1.2				
butan-1-ol	<7.50064	<1	DIN EN 13016-2			
xylene	6.7	0.89				
2-methoxy-1-methylethyl acetate	2.7	0.36	OECD 104			
hydrocarbons, C9, aromatics	2.5	0.33				
di-isobutyl ketone	1.72514	0.23				
octamethylcyclotetrasiloxane	0.99008	0.13				
fatty acids, C14-18 and C16-18-unsatd., maleated	0.30003	0.04		1.50013	0.2	
maleic anhydride	0.24752	0.033				
phosphoric acid	0.03	0.004				
silane, trimethoxy[3-(oxiranyl-methoxy)propyl]-	0.0082	0.0011				
4,4'-Isopropylidenedicyclohexanol, oligomeric reaction products with 1-chloro-2,3-epoxypropane	0.000015	0.000002				
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine	0	0				
propylidynetrimethanol	0	0				

**Relative vapour density** : Not available.

**Density** : 1.344 to 1.553 g/cm<sup>3</sup>

**Solubility(ies)** :

Media	Result
cold water	Not soluble
hot water	Not soluble

**Partition coefficient: n-octanol/water** : Not applicable.

**Auto-ignition temperature** :

Ingredient name	°C	°F	Method
hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	280 to 470	536 to 878	
hydrocarbons, C9, aromatics	280 to 470	536 to 878	
2-[[[1-[[[2,3-dihydro-2-oxo-1H-benzimidazol-5-yl)amino]carbonyl]-2-oxopropyl]azo]benzoic acid	320	608	
2-methoxy-1-methylethyl acetate	333	631.4	DIN 51794
di-isobutyl ketone	345	653	
butan-1-ol	355	671	EU A.15
fatty acids, C14-18 and C16-18-unsatd., maleated	360	680	
octamethylcyclotetrasiloxane	384 to 387	723.2 to 728.6	ASTM E 659



## Section 9. Physical and chemical properties and safety characteristics

silane, trimethoxy[3-(oxiranyl-methoxy)propyl]-	400	752	DIN 51794
xylene	432	809.6	
ethylbenzene	432.22	810	
methanol	455	851	DIN 51794
maleic anhydride	477	890.6	
Toluene	480	896	

**Decomposition temperature** : Not available.

**Viscosity** : Kinematic (40°C (104°F)): >20.5 mm<sup>2</sup>/s (>20.5 cSt)

### Particle characteristics

**Median particle size** : Not applicable.

## Section 10. Stability and reactivity

**Chemical stability** : The product is stable.

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

**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.

**Incompatible materials** : Reactive or incompatible with the following materials:  
oxidising materials

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### 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 <sub>0</sub> Dermal	Rabbit	4300 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	-
maleic anhydride	LD50 Oral	Rat	400 mg/kg	-

#### 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	-
silane, trimethoxy[3-(oxiranyl-methoxy)propyl]-	Eyes - Irritant	Mammal - species unspecified	-	-	-
maleic anhydride	Eyes - Severe irritant	Rabbit	-	1 Percent	-

#### Sensitisation

## Section 11. Toxicological information

Product/ingredient name	Route of exposure	Species	Result
maleic anhydride	skin	Mammal - species unspecified	Sensitising

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	Category 3	-	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	-	central nervous system (CNS)
ethylbenzene	Category 2	-	hearing organs
maleic anhydride	Category 1 Category 2	inhalation	respiratory system

### Aspiration hazard

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

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes mild skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.

## Section 11. Toxicological information

- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Potential chronic health effects

Not available.

- General** : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : No known significant effects or critical hazards.

### Numerical measures of toxicity

#### 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 Optima Comp A	N/A	15391.8	N/A	115.0	N/A
xylene	N/A	1100	N/A	11	N/A
ethylbenzene	N/A	N/A	N/A	11	N/A
maleic anhydride	400	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 <10 mg/l	Daphnia	48 hours
	Acute IC50 <10 mg/l	Algae	72 hours
ethylbenzene	Acute LC50 <10 mg/l	Fish	96 hours
	Acute EC50 7700 µg/l Marine water	Algae - Skeletonema costatum	96 hours
maleic anhydride	Acute EC50 2.93 mg/l	Daphnia	48 hours
	Acute LC50 4.2 mg/l	Fish	96 hours
	Acute LC50 230 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

## Section 12. Ecological information

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
silane, trimethoxy[3-(oxiranyl-methoxy)propyl]-hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	-	-	Not readily
ethylbenzene	-	-	Not readily
octamethylcyclotetrasiloxane	-	-	Readily
			Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	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
octamethylcyclotetrasiloxane	6.488	13400	high
maleic anhydride	-2.78	-	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.




## Section 13. Disposal considerations

**Disposal methods** : 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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

	UN	IMDG	IATA
<b>UN number</b>	UN1263	UN1263	UN1263
<b>UN proper shipping name</b>	Paint	Paint	Paint

## Section 14. Transport information

Transport hazard class(es)	3 	3 	3 
Packing group	III	III	III
Environmental hazards	No.	No.	No.

### Additional information

**ADR/RID** : Tunnel restriction code: (D/E)  
Hazard identification number: 30

**IMDG** : **Emergency schedules** F-E, S-E

**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.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

### TCCSCA List of toxic chemicals

Not applicable.

### TCCSCA List of concerned chemicals

Not applicable.

**OSHA Enforcement Rules Article 28** : This product contains substances "Specially hazardous to health": xylene, butan-1-ol, methanol, Toluene.

**Organic solvent poisoning prevention rule** : Type 2

### Priority management chemicals, Article 2

**CMR chemical substances, category 1 (Article 2.2 (I))** : Applicable

**Chemical substances possessing physical hazards or health hazards (Article 2.2 (II))**

Ingredient name	Name on list	Concentration
2-methoxy-1-methylethyl acetate	propylene glycol monomethyl ether acetate	≤0.1

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

## Section 16. Other information

### Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SKIN SENSITISATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 AQUATIC TOXICITY (CHRONIC) - Category 3	On basis of test data Calculation method Calculation method Calculation method Calculation method Calculation method

**References** : Not available.

**Organisation that prepared the SDS** : Jotun AS, Norway  
+47 33 45 70 00

### History

**Date of printing** : 25.11.2024

**Date of previous issue** : 20.11.2024

**Version** : 1.12

**Key to abbreviations** :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- N/A = Not available
- SGG = Segregation Group
- UN = United Nations

✔ Indicates information that has changed from previously issued version.

### 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.