

Hardtop Optima Comp B

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

1.1 Product identifier	
Product name	: Hardtop Optima Comp B
UFI	: HXMU-A0HW-F00U-CW05
Product code	: 9620
Product description	: Hardener.
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

Jotun A/S	Jotun Paints (Europe) Ltd.
P.O.Box 2021	Stather Road
3202 Sandefjord	Flixborough, Scunthorpe
Norway	North Lincolnshire
Tel: + 47 33 45 70 00	DN15 8RR
Fax: +47 33 45 72 42	England
E-mail: SDSJotun@jotun.no	C C
	Tel: +44 17 24 40 00 00
	Fax: +44 17 24 40 01 00
1 4 Emergency telephone number	

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number: Contact NHS Direct; phone 0845 4647 or 111. Open 24/7.Supplier: +47 33 45 70 00 Jotun Norway (head office)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360D STOT RE 2, H373

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

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

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

2.2 Label elements

SECTION 2: Hazards identification

Signal word : Danger. Hazard statements : 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. Precautionary statements : Not applicable. Prevention : P200 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing, eye protection, face protection or hearing protection. P260 - Do not breathe vapour or spray. Response : P308 + P313 - If skin irritation or rank occurs: Get medical advice or attention. P368 + P364 - Take off contaminated clothing and wash it before reuse. P303 + P364 - Take off contaminated clothing and wash it before reuse. P303 + P364 - Take off contaminated clothing and wash it before reuse. P303 + P364 - Take off contaminated clothing and wash it before reuse. P303 + P364 - Take off contaminated clothing and wash it before reuse. P303 + P364 - Take off contaminated clothing and wash it before reuse. P303 + P313 - If skin irritation or rank occurs: Get medical advice or attention. P306 + 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 : P601 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Supplemental label : Not applicable. glacing on the market and use of ortering any substances, mixtures and articles Sp	Hazard pictograms	:	
Hazard statements : H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H317 - May cause an allergic skin reaction. H316 - Causes serious eye damage. H360D - May damage the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure. Precautionary statements General : Not applicable. Prevention : P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P280 - 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. P303 + P313 - IF exposed or concerned: Get medical advice or attention. P362 + P364 - Take off contaminated clothing and wash it before reuse. P303 + P313 - IF ox Skin: Wrash with pilenty of water. P303 + P313 - IF Skin irritation or rash occurs: Get medical advice or attention. P305 + P361 + D383, P310 - IF NE YES: Rinse cautiously with water or several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. Supplemental label : Not applicable. element	Signal word		Danger.
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for PBT or vPvB according to Regulation (EC) No.vPvB.1907/2006, Annex XIIIVPvB.Other hazards which do: None known.	2.3 Other hazards		
	for PBT or vPvB according to Regulation (EC) No.	:	·
		1	None known.
SECTION 3: Composition/information on ingredients	SECTION 3: Compos	iti	on/information on ingredients

3.2 Mixtures

: Mixture

SECTION 3: Composition/information on ingredients

SECTION 5. Composition/information on ingredients				
Product/ingredient name	Identifiers	%	Classification	Туре
7.2-ethanediamine, n-[3- (dimethoxymethylsilyl)propyl]-	EC: 221-336-6 CAS: 3069-29-2	≥10 - <25	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317	[1]
dioctyltin dilaurate	EC: 222-883-3 CAS: 3648-18-8	<10	Repr. 1B, H360D STOT RE 1, H372 (immune system) See Section 16 for the full text of the H statements declared above.	[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, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Туре

[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

4.1 Description of 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.
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.

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SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

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

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

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

Contains 1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]-. May produce an allergic reaction.

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)

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 : In a fire or if heated, a pressure increase will occur and the container may burst. substance or mixture

SECTION 5: Firefighting measures

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

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SECTION 6: Accidental release measures .

6.1 Personal precautions, pro	tective equipment and emergency procedures
For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2 Environmental precautions	: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental

pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Small spill	: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (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.
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

SECTION 7: Handling and storage

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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. 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. 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.

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

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. STEL: 0.2 mg/m³, (as Sn) 15 minutes. TWA: 0.1 mg/m³, (as Sn) 8 hours.

Biological exposure indices

No exposure indices known.

Recommended monitoring : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Туре	Exposure	Value	Population	Effects
✔,2-ethanediamine, n-[3- (dimethoxymethylsilyl)propyl]-	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 bw/day	Workers	Systemic
	DNEL	Long term Inhalation	5.2 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	21.1 mg/m ³		Systemic
te of issue/Date of revision : 21	.04.2023	0	: 30.03.20		rsion : 1.03

SECTION 8: Exposure controls/personal protection

beomon of exposure controls/personal protection						
	DNEL	Short term	26400 mg/	General	Systemic	
		Inhalation	m³	population		
dioctyltin dilaurate	DNEL	Long term Oral	0.0005 mg/	General	Systemic	
			kg bw/day	population		
	DNEL	Long term	0.0009 mg/	General	Systemic	
		Inhalation	m³	population		
	DNEL	Long term	0.0035 mg/	Workers	Systemic	
		Inhalation	m³			

PNECs

No PNECs available

8.2 Exposure controls Appropriate engineering controls	: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Individual protection meas	<u>ures</u>
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. May be used, gloves(breakthrough time) 4 - 8 hours: butyl rubber (> 0.4 mm), fluor rubber (> 0.35 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	: 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.
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.

SECTION 8: Exposure controls/personal protection

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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.

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

<u>Appearance</u>		
Physical state	1	Liquid.
Colour	:	Colourless.
Odour	1	Characteristic.
Odour threshold	1	Not applicable.
Melting point/freezing point	1	Not applicable.
Initial boiling point and boiling range	:	Lowest known value: 240°C (464°F) (1,2-ethanediamine, n-[3- (dimethoxymethylsilyl)propyl]-).
Flammability	:	Not applicable.
Upper/lower flammability or explosive limits	:	Not applicable.
Flash point	:	Closed cup: 180°C (356°F)
Auto-ignition temperature	:	Lowest known value: 280°C (536°F) (1,2-ethanediamine, n-[3- (dimethoxymethylsilyl)propyl]-).
Decomposition temperature	:	Not available.
рН	1	Not applicable.
Viscosity	:	Kinematic (40°C): >20.5 mm²/s
Solubility(ies)	:	
Solubility(ies) Media	:	Result
	:	Result Not soluble Not soluble
Media cold water		Not soluble Not soluble
Media cold water hot water Partition coefficient: n-octanol/	':	Not soluble Not soluble
Media cold water hot water Partition coefficient: n-octanol/ water	:	Not soluble Not soluble Not available. Highest known value: 0.001 kPa (0.008 mm Hg) (at 20°C) (1,2-ethanediamine, n- [3-(dimethoxymethylsilyl)propyl]-). Weighted average: 0.0008 kPa (0.006 mm
Media cold water hot water Partition coefficient: n-octanol/ water Vapour pressure	' : : :	Not soluble Not soluble Not available. Highest known value: 0.001 kPa (0.008 mm Hg) (at 20°C) (1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]-). Weighted average: 0.0008 kPa (0.006 mm Hg) (at 20°C)
Media cold water hot water Partition coefficient: n-octanol/ water Vapour pressure Evaporation rate	· : : :	Not soluble Not soluble Not available. Highest known value: 0.001 kPa (0.008 mm Hg) (at 20°C) (1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]-). Weighted average: 0.0008 kPa (0.006 mm Hg) (at 20°C) Not available.
Media cold water hot water Partition coefficient: n-octanol/water Vapour pressure Evaporation rate Density	· : : : :	Not soluble Not soluble Not available. Highest known value: 0.001 kPa (0.008 mm Hg) (at 20°C) (1,2-ethanediamine, n- [3-(dimethoxymethylsilyl)propyl]-). Weighted average: 0.0008 kPa (0.006 mm Hg) (at 20°C) Not available. 1.104 g/cm³
Media cold water hot water Partition coefficient: n-octanol/ water Vapour pressure Evaporation rate Density Vapour density	· · · · · · · · · · · · · · · · · · ·	Not soluble Not soluble Not available. Highest known value: 0.001 kPa (0.008 mm Hg) (at 20°C) (1,2-ethanediamine, n- [3-(dimethoxymethylsilyl)propyl]-). Weighted average: 0.0008 kPa (0.006 mm Hg) (at 20°C) Not available. 1.104 g/cm³ Not available.
Media cold water hot water Partition coefficient: n-octanol/ water Vapour pressure Evaporation rate Density Vapour density Explosive properties	· · · · · · · · · · · · · · · · · · ·	Not soluble Not soluble Not available. Highest known value: 0.001 kPa (0.008 mm Hg) (at 20°C) (1,2-ethanediamine, n- [3-(dimethoxymethylsilyl)propyl]-). Weighted average: 0.0008 kPa (0.006 mm Hg) (at 20°C) Not available. 1.104 g/cm³ Not available. Not available. Not available.
Media cold water hot water Partition coefficient: n-octanol/ water Vapour pressure Evaporation rate Density Vapour density Explosive properties Oxidising properties	· : : : : :	Not soluble Not soluble Not available. Highest known value: 0.001 kPa (0.008 mm Hg) (at 20°C) (1,2-ethanediamine, n- [3-(dimethoxymethylsilyl)propyl]-). Weighted average: 0.0008 kPa (0.006 mm Hg) (at 20°C) Not available. 1.104 g/cm³ Not available. Not available. 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	1	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.

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 CLP Regulation (EC) No 1272/2008 and is classified for toxicological properties accordingly. See Sections 2 and 3 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness.

Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin.

If splashed in the eyes, the liquid may cause irritation and reversible damage.

Ingestion may cause nausea, diarrhea and vomiting.

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

Contains 1,2-ethanediamine, n-[3-(dimethoxymethylsilyl)propyl]-. May produce an allergic reaction.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1,2-ethanediamine, n-[3- (dimethoxymethylsilyl)propyl] -		Mammal - species unspecified	200 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	
✓ardtop Optima Comp B 1,2-ethanediamine, n-[3-(dimethoxymethylsilyl) propyl]-	2510.0 500	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1,2-ethanediamine, n-[3- (dimethoxymethylsilyl)propyl]-	Eyes - Severe irritant	Mammal - species unspecified	-	-	-
	Skin - Moderate irritant	Mammal - species unspecified	-	-	-

Sensitisation

SECTION 11: Toxicological information

Product/ingredient name	Route of exposure	Species	Result
1,2-ethanediamine, n-[3- (dimethoxymethylsilyl)propyl]-	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 Fertility effects : May damage the unborn child.

Teratogenicity

May damage the unborn child.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
dioctyltin dilaurate	Category 1	-	immune system

: No known significant effects or critical hazards.

Aspiration hazard

Not available.

Potential acute health effects

Eye contact	:	Causes serious eye damage.
Inhalation	:	No known significant effects or critical hazards.
Skin contact	:	Causes skin irritation. May cause an allergic skin reaction.
Ingestion	:	No known significant effects or critical hazards.
Symptoms related to the phy	sic	cal, chemical and toxicological characteristics
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
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.
Other information	:	None identified.
Other information	-	None identified.

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 not classified as hazardous to the environment.

Conclusion/Summary : No known significant effects or critical hazards.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
dioctyltin dilaurate	-	<100	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 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).

consulted for any available	use-specific information provided in the Exposure Scenario(s).
13.1 Waste treatment met	hods
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.
Waste catalogue	
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.
Type of packaging	Waste catalogue
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. 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	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

user

14.6 Special precautions for : **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 Transport in bulk according to IMO instruments

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

: Not available.

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, stannane, dioctyl-, bis (coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	Candidate	D(2020) 9139-DC	19.01.2021

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions : Restricted to professional users.

on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Seveso Directive

Date of issue/Date of revision

SECTION 15: Regulatory information

This product is not controlled under the Seveso Directive.

EU regulations

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

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.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

assessment

15.2 Chemical safety

: 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.

	5 I J
Abbreviations and	: ATE = Acute Toxicity Estimate
acronyms	GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and
	Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019
	No. 720 and amendments
	DMEL = Derived Minimal Effect Level
	DNEL = Derived No Effect Level
	EUH statement = GB 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

Classification	Justification
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Repr. 1B, H360D	Calculation method
STOT RE 2, H373	Calculation method

Full text of abbreviated H statements

Hardtop Optima Comp B

SECTION 16: Other information

H 302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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.

Full text of classifications

Acute Tox. 4	ACUTE TOXICITY - Category 4
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Repr. 1B	REPRODUCTIVE TOXICITY - 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
Date of printing	: 21.04.2023
Date of issue/ Date of	: 21.04.2023
revision	
Date of previous issue	e : 30.03.2023
Version	: 1.03
Martha a farma a dam	

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.