

Conforms to Regulation (EC) No. 453/2010 (REACH), Annex II, as amended by Regulation (EU) No. 2015/830

# SAFETY DATA SHEET



## Hardtop Flexi Comp A

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

#### 1.1 Product identifier

**Product name** : Hardtop Flexi Comp A  
**Product code** : 1531  
**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

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

See Annex to the Safety data sheet for additional information in the Exposure Scenario(s).

#### 1.3 Details of the supplier of the safety data sheet

MANUFACTURER/SUPPLIER:  
 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 Direct; phone 0845 4647 or 111. Open 24/7.

### 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  
 Skin Irrit. 2, H315  
 Eye Irrit. 2, H319  
 Aquatic Chronic 2, H411

#### 2.2 Label elements

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**SECTION 2: Hazards identification**

**Hazard pictograms**



**Signal word**

: Warning.

**Hazard statements**

: H226 - Flammable liquid and vapour.  
 H319 - Causes serious eye irritation.  
 H315 - Causes skin irritation.  
 H411 - Toxic to aquatic life with long lasting effects.

**Precautionary statements**

**General**

: Not applicable.

**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.

**Response**

: P391 - Collect spillage.  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Storage**

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

**Disposal**

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

**Hazardous ingredients**

: Xylene

**Supplemental label elements**

: Contains bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate and fatty acids, C14-18 and C16-18-unsatd., maleated. May produce an allergic reaction.

**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 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	≥10 - ≤25	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1] [2]	C
n-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4	≤10	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	[1] [2]	-
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	<10	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304	[1] [2]	-
trizinc bis(orthophosphate)	REACH #: 01-2119485044-40 EC: 231-944-3	≤10	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]	-

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**SECTION 3: Composition/information on ingredients**

bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	CAS: 7779-90-0 Index: 030-011-00-6 REACH #: 01-2119491304-40 EC: 255-437-1	<1	Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]	-
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	CAS: 41556-26-7 REACH #: 01-2119491304-40 EC: 280-060-4	≤0.3	Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]	-
fatty acids, C14-18 and C16-18-unsatd., maleated	CAS: 82919-37-7 REACH #: 01-2119976378-19	≤0.3	Skin Irrit. 2, H315 Skin Sens. 1, H317 <b>See Section 16 for the full text of the H statements declared above.</b>	[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** : Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart for at least 10 minutes and seek immediate medical advice.
- 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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**4.2 Most important symptoms and effects, both acute and delayed**

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.

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**SECTION 4: First aid measures**

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 bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate, fatty acids, C14-18 and C16-18-unsatd., maleated. May produce an allergic reaction.

**Potential acute health effects**

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

**Over-exposure signs/symptoms**

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

**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<sub>2</sub>, 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 toxic 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  
phosphorus 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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**SECTION 5: Firefighting measures**

- 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. Avoid breathing 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

**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.

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**SECTION 7: Handling and storage**

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)**

**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	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 441 mg/m <sup>3</sup> 15 minutes. STEL: 100 ppm 15 minutes. TWA: 220 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
n-butyl acetate	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011).</b> STEL: 966 mg/m <sup>3</sup> 15 minutes. STEL: 200 ppm 15 minutes. TWA: 724 mg/m <sup>3</sup> 8 hours. TWA: 150 ppm 8 hours.
ethylbenzene	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 552 mg/m <sup>3</sup> 15 minutes. STEL: 125 ppm 15 minutes. TWA: 100 ppm 8 hours. TWA: 441 mg/m <sup>3</sup> 8 hours.

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**SECTION 8: Exposure controls/personal protection**

**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/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	289 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	77 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	108 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	14.8 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Long term Oral	1.6 mg/kg bw/day	Consumers	Systemic
n-butyl acetate	DNEL	Short term Inhalation	960 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	960 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	480 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	480 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	859.7 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Short term Inhalation	859.7 mg/m <sup>3</sup>	Consumers	Local
	DNEL	Long term Inhalation	102.34 mg/m <sup>3</sup>	Consumers	Systemic
ethylbenzene	DNEL	Long term Inhalation	102.34 mg/m <sup>3</sup>	Consumers	Local
	DNEL	Short term Inhalation	293 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	180 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	77 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	15 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Long term Oral	1.6 mg/kg bw/day	Consumers	Systemic
	trizinc bis(orthophosphate)	DNEL	Long term Dermal	83 mg/kg bw/day	Workers
DNEL		Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Systemic
DNEL		Long term Dermal	83 mg/kg bw/day	Consumers	Systemic

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**SECTION 8: Exposure controls/personal protection**

	DNEL	Long term Inhalation	2.5 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Long term Oral	0.83 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	-
n-butyl acetate	PNEC	Fresh water	0.18 mg/l	-
	PNEC	Marine	0.018 mg/l	-
	PNEC	Sewage Treatment Plant	35.6 mg/l	-
	PNEC	Fresh water sediment	0.981 mg/kg dwt	-
	PNEC	Marine water sediment	0.0981 mg/kg dwt	-
	PNEC	Soil	0.0903 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	-
trizinc bis(orthophosphate)	PNEC	Fresh water	20.6 µg/l	-
	PNEC	Marine	6.1 µg/l	-
	PNEC	Sewage Treatment Plant	52 µg/l	-
	PNEC	Fresh water sediment	117.8 mg/kg dwt	-
	PNEC	Marine water sediment	56.5 mg/kg dwt	-
	PNEC	Soil	35.6 mg/kg dwt	-

**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 to EN 166 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.

**Skin protection**



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**SECTION 8: Exposure controls/personal 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.  
 Wear suitable gloves tested to EN374.  
 May be used, gloves(breakthrough time) 4 - 8 hours: neoprene, butyl rubber  
 Not recommended, gloves(breakthrough time) < 1 hour: Viton®, PE, PVC  
 Recommended, gloves(breakthrough time) > 8 hours: fluor rubber, 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 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** : 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 colours.
- Odour** : Characteristic.
- Odour threshold** : Not applicable.
- pH** : Not applicable.
- Melting point/freezing point** : Not applicable.
- Initial boiling point and boiling range** : Lowest known value: 126°C (258.8°F) (n-butyl acetate). Weighted average: 133.91°C (273°F)

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**SECTION 9: Physical and chemical properties**

<b>Flash point</b>	: Closed cup: 25°C
<b>Evaporation rate</b>	: Highest known value: 1 (n-butyl acetate) Weighted average: 0.83 compared with butyl acetate
<b>Flammability (solid, gas)</b>	: Not applicable.
<b>Burning time</b>	: Not applicable.
<b>Burning rate</b>	: Not applicable.
<b>Upper/lower flammability or explosive limits</b>	: 0.8 - 7.6%
<b>Vapour pressure</b>	: Highest known value: 1.5 kPa (11.3 mm Hg) (at 20°C) (n-butyl acetate). Weighted average: 0.87 kPa (6.53 mm Hg) (at 20°C)
<b>Vapour density</b>	: Highest known value: 4 (Air = 1) (n-butyl acetate). Weighted average: 3.77 (Air = 1)
<b>Relative density</b>	: 1.154 to 1.273 g/cm <sup>3</sup>
<b>Solubility(ies)</b>	: Insoluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/ water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Lowest known value: 385°C (725°F) (2-oxepanone, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol).
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (40°C): >0.205 cm <sup>2</sup> /s (>20.5 mm <sup>2</sup> /s)
<b>Explosive properties</b>	: Not available.
<b>Oxidising properties</b>	: Not available.

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

<b>10.1 Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>10.2 Chemical stability</b>	: The product is stable.
<b>10.3 Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.4 Conditions to avoid</b>	: 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.
<b>10.5 Incompatible materials</b>	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids. Under normal conditions of storage and use, hazardous reactions will not occur.
<b>10.6 Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**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.

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**SECTION 11: Toxicological information**

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 bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate, methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate, fatty acids, C14-18 and C16-18-unsatd., maleated. May produce an allergic reaction.

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LC50 Inhalation Vapour	Rat	20 mg/l	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
	TDL <sub>o</sub> Dermal	Rabbit	4300 mg/kg	-
n-butyl acetate	LC50 Inhalation Vapour	Rat	>21.1 mg/l	4 hours
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	13100 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	6235.2 mg/kg
Inhalation (vapours)	46.76 mg/l

**Specific target organ toxicity (single exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
n-butyl acetate	Category 3	Not applicable.	Narcotic effects

**Specific target organ toxicity (repeated exposure)**

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	Not determined	hearing organs

**Aspiration hazard**

Product/ingredient name	Result
ethylbenzene	ASPIRATION HAZARD - Category 1

**Potential acute health effects**

- Eye contact** : Causes serious eye irritation.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation.
- 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 or irritation  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

**Potential chronic health effects**

- General** : No known significant effects or critical hazards.

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**SECTION 11: Toxicological information**

- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

**SECTION 12: Ecological information**

**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
ethylbenzene	Acute EC50 7.2 mg/l Acute EC50 2.93 mg/l Acute LC50 4.2 mg/l	Algae Daphnia Fish	48 hours 48 hours 96 hours
trizinc bis(orthophosphate)	Acute LC50 0.14 mg/l Chronic NOEC 0.1 mg/l	Fish - Oncorhynchus mykiss Micro-organism	96 hours 4 hours

**Conclusion/Summary** : Water polluting material. May be harmful to the environment if released in large quantities. This material is toxic 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
ethylbenzene	-	-	Readily
trizinc bis(orthophosphate)	-	-	Not readily
bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate	-	-	Not readily
methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	-	-	Not readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
xylene	3.12	8.1 to 25.9	low
n-butyl acetate	2.3	-	low
ethylbenzene	3.6	-	low
trizinc bis(orthophosphate)	-	60960	high

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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.

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**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

**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.

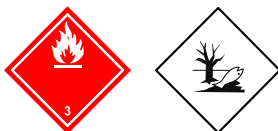
Transport in accordance with ADR/RID, IMDG/IMO and ICAO/IATA and national regulation.

**International transport regulations**

**14.1 UN number** : 1263

**14.2 UN proper shipping name** : Paint. Marine pollutant (trizinc bis(orthophosphate), bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate)

**14.3 Transport hazard class(es)** : 3



**Marking** : The environmental hazardous / marine pollutant mark is only applicable for packages containing more than 5 litres for liquids and 5 kg for solids.

**14.4 Packing group** : III

**14.5 Environmental hazards** : Yes.

**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

**IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

**Emergency schedules (EmS)**

F-E, S-E

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** : Not available.

**IMDG Code Segregation group** : Not available.

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## SECTION 15: Regulatory information

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

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

##### Annex XIV - List of substances subject to authorisation

##### 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** :  At least one component is not listed.

**Black List Chemicals** : Not listed

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

**Industrial emissions (integrated pollution prevention and control) - 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** : Not applicable.

## 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]

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2, H319	Calculation method
Aquatic Chronic 2, H411	Calculation method

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**SECTION 16: Other information**

**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 Harmful in contact with skin.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H336 May cause drowsiness or dizziness.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.  
 H411 Toxic 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 Acute 1, H400 ACUTE AQUATIC HAZARD - Category 1  
 Aquatic Chronic 1, H410 LONG-TERM AQUATIC HAZARD - Category 1  
 Aquatic Chronic 2, H411 LONG-TERM AQUATIC HAZARD - Category 2  
 Asp. Tox. 1, H304 ASPIRATION HAZARD - Category 1  
 EUH066 Repeated exposure may cause skin dryness or cracking.  
 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 SENSITISATION - Category 1  
 STOT RE 2, H373 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2  
 STOT SE 3, H336 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3

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**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.



## Hardtop Flexi Comp A

### Exposure Scenario: Use in coatings - Industrial use

Sector of Use	: Industrial use
Process Category	: PROC05 PROC07 PROC08a PROC10
Environmental release category(ies)	: ERC4

Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

### Operational conditions and risk management measures

#### Control of worker exposure

Frequency and duration of use	: Covers daily exposures up to 8 hours
General - Operational conditions	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented
General - Risk management measures	: Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training. Wear suitable coveralls to prevent exposure to the skin. Use suitable eye protection. See Section 8 for information on appropriate personal protective equipment.

#### Type of activity or process

#### Risk management measures

Preparation of material for application	: Provide a good standard of controlled ventilation (10 to 15 air changes per hour).
Roller, spreader, flow application	: Provide extract ventilation to points where emissions occur. Avoid carrying out activities involving exposure for more than 4 hours. or Provide extract ventilation to points where emissions occur. Wear a respirator conforming to EN140 with type A/P2 filter or better.
Spraying - Manual	: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Wear a full-face respirator conforming to EN136 with Type A/P2 filter or better. Avoid carrying out activities involving exposure for more than 4 hours.

### Control of environmental exposure

Organisational measures to prevent/limit release from site	: Prevent environmental discharge consistent with regulatory requirements.
Conditions and measures related to external treatment of waste for disposal	: External treatment and disposal of waste should comply with applicable local and/or national regulations. See Section 13 for additional waste treatment information.
Conditions and measures related to external recovery of waste	: External recovery and recycling of waste should comply with applicable local and/or national regulations.

### Additional information

The exposure scenario for the mixture is based on the following substances:	
REACH #:	01-2119488216-32
REACH #:	01-2119485796-17 (from Comp B)





## Hardtop Flexi Comp A

### Exposure Scenario: Use in coatings - Professional use

Sector of Use	: Professional use
Process Category	: PROC05 PROC08a PROC10 PROC11
Environmental release category(ies)	: ERC8a ERC8d

Covers the use in coatings (paints, inks, adhesives, etc) including exposures during use (including product transfer and preparation, application by brush, spray by hand or similar methods) and equipment cleaning.

### Operational conditions and risk management measures

#### Control of worker exposure

Frequency and duration of use	: Covers daily exposures up to 8 hours
General - Operational conditions	: Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes a good basic standard of occupational hygiene is implemented
General - Risk management measures	: Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training. Wear suitable coveralls to prevent exposure to the skin. Use suitable eye protection. See Section 8 for information on appropriate personal protective equipment.

#### Type of activity or process

#### Risk management measures

Preparation of material for application - Indoor	: Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 1 hour. or Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear a respirator conforming to EN140 with type A/P2 filter or better.
Preparation of material for application - Outdoor	: Ensure operation is undertaken outdoors. Avoid carrying out activities involving exposure for more than 1 hour. or Ensure operation is undertaken outdoors. Wear a respirator conforming to EN140 with type A/P2 filter or better.
Equipment cleaning and maintenance	: Drain down system prior to equipment break-in or maintenance. Avoid carrying out activities involving exposure for more than 4 hours.
Roller, spreader, flow application - Indoor	: Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out activities involving exposure for more than 4 hours. or Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear a respirator conforming to EN140 with type A/P2 filter or better.
Roller, spreader, flow application - Outdoor	: Ensure operation is undertaken outdoors. Wear a respirator conforming to EN140 with type A/P2 filter or better. Avoid carrying out activities involving exposure for more than 4 hours.
Spraying - Manual - Indoor	: Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. Wear a full-face respirator conforming to EN136 with Type A/P2 filter or better. Avoid carrying out activities involving exposure for more than 4 hours.
Spraying - Manual - Outdoor	: Ensure operation is undertaken outdoors. Wear a full-face respirator conforming to EN136 with Type A/P2 filter or better. Avoid carrying out activities involving exposure for more than 4 hours.

#### Control of environmental exposure

Organisational measures to prevent/limit release from site	: Prevent environmental discharge consistent with regulatory requirements.
Conditions and measures related to external treatment of waste for disposal	: External treatment and disposal of waste should comply with applicable local and/or national regulations. See Section 13 for additional waste treatment information.
Conditions and measures related to external recovery of waste	: External recovery and recycling of waste should comply with applicable local and/or national regulations.

#### Additional information

The exposure scenario for the mixture is based on the following substances:	
REACH #: 01-2119488216-32	
REACH #: 01-2119485796-17 (from Comp B)	