

**Mare Nostrum SP****SECTION 1: Identification of the substance/mixture and of the company/  
undertaking****1.1 Product identifier**

**Product name** : Mare Nostrum SP  
**Product code** : 8080  
**Product description** : Paint.  
**Product type** : Liquid.  
**Other means of identification** : Not available.

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

Uses in Coatings - Consumer use: Apply this product only as specified on the label.  
Uses in Coatings - Professional use

**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; phone 111.

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

**Product definition** : Mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Flam. Liq. 3, H226  
Skin Sens. 1, H317  
Aquatic Acute 1, H400  
Aquatic Chronic 1, H410

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

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

**Classification** : R10  
Xn; R20/21/22  
R43  
N; R50/53

**SECTION 2: Hazards identification**

- Physical/chemical hazards** : Flammable.
- Human health hazards** : Harmful by inhalation, in contact with skin and if swallowed. May cause sensitisation by skin contact.
- Environmental hazards** : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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

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

**2.2 Label elements****Hazard pictograms**

**Signal word** : Warning.

**Hazard statements** : Flammable liquid and vapour.  
May cause an allergic skin reaction.  
Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

**General** : Keep out of reach of children.

**Prevention** :  Wear protective gloves. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid release to the environment.

**Response** :  Collect spillage. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.

**Storage** :  Store in a well-ventilated place. Keep cool.

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

**Hazardous ingredients** : rosin

**Supplemental label elements** : Not applicable.

**Additional information** :  Antifouling. Active substances: dicopper oxide (CAS 1317-39-1) 19.1 % w/w. Do not reuse empty containers.

**Additional information** : Not applicable.

**Additional information** :  HSE No. 9110. DO NOT BREATHE SPRAY MIST. WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS OF A CONTRASTING COLOUR TO THE PRODUCT BEING APPLIED, UNDERNEATH A DISPOSABLE COVERALL WITH HOOD), SUITABLE GLOVES AND IMPERVIOUS FOOTWEAR THAT PROTECTS THE LOWER LEG. WEAR SUITABLE RESPIRATORY EQUIPMENT (such as air-fed respiratory protective equipment with combined protective helmet and visor) when spraying. WEAR SUITABLE RESPIRATORY EQUIPMENT (such as FFP3 or an equivalent standard) when working in the vicinity of the spray plume. DISPOSE OF PROTECTIVE GLOVES after use.

**2.3 Other hazards**

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

Mare Nostrum SP

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

Substance/mixture : Mixture

Product/ingredient name	Identifiers	%	Classification		Type	Notes
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]		
dicopper oxide	REACH #: 01-2119513794-36 EC: 215-270-7  CAS: 1317-39-1  Index: 029-002-00-X	≥10 - <23	Xn; R22  N; R50/53	Acute Tox. 4, H302  Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]	-
zinc oxide	REACH #: 01-2119463881-32 EC: 215-222-5  CAS: 1314-13-2 Index: 030-013-00-7	≥10 - <25	N; R50/53	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]	-
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	REACH #: 01-2119455851-35 EC: 265-199-0 CAS: 64742-95-6	≥10 - <18	R10  Xn; R65 Xi; R37 R66, R67 N; R51/53	Flam. Liq. 3, H226  STOT SE 3, H335 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	[1] [2]	H-P
rosin	REACH #: 01-2119480418-32 EC: 232-475-7 CAS: 8050-09-7 Index: 650-015-00-7	≥5 - <10	R43	Skin Sens. 1, H317	[1] [2]	-
xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9	≥5 - <10	R10  Xn; R20/21 Xi; R38	Flam. Liq. 3, H226  Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	[1] [2]	C
2-methoxy-1-methylethyl acetate	REACH #: 01-2119475791-29 EC: 203-603-9 CAS: 108-65-6 Index: 607-195-00-7	≥3 - <5	R10	Flam. Liq. 3, H226	[2]	-
1-methoxy-2-propanol	REACH #: 01-2119457435-35 EC: 203-539-1 CAS: 107-98-2 Index: 603-064-00-3	≥1 - <1,9	R10  R67	Flam. Liq. 3, H226  STOT SE 3, H336	[1] [2]	-
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4  Index: 601-023-00-4	≥1 - <3	F; R11  Xn; R20, R48/20, R65	Flam. Liq. 2, H225  Acute Tox. 4, H332 STOT RE 2, H373 (ears) Asp. Tox. 1, H304	[1] [2]	-
			<b>See Section 16 for the full text of the R-phrases declared above.</b>	<b>See Section 16 for the full text of the H statements declared above.</b>		

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

*Mare Nostrum SP***SECTION 3: Composition/information on ingredients**

- [1] Substance classified with a health or environmental hazard  
 [2] Substance with a workplace exposure limit  
 [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII  
 [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII  
 [5] Substance of equivalent concern

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

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- General** : In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and seek medical advice.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- 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**

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**SECTION 5: Firefighting measures**

**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 very 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  
metal oxide/oxides

**5.3 Advice for firefighters**

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flames, 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 spilled 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 spilled product.

**6.4 Reference to other sections**

: See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

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

### 7.1 Precautions for safe handling

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

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

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another.

Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Put on appropriate personal protective equipment (see Section 8).

Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

#### Information on fire and explosion protection

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

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

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

#### Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

#### Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

### 7.3 Specific end use(s)

**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
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	<b>EH40-WEL (United Kingdom (UK), 12/2011). Absorbed through skin.</b> TWA: 200 mg/m <sup>3</sup> 8 hours. Form: All forms TWA: 40 ppm 8 hours. Form: All forms
rosin	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Skin sensitiser.</b> STEL: 0,15 mg/m <sup>3</sup> 15 minutes. Form: Fume TWA: 0,05 mg/m <sup>3</sup> 8 hours. Form: Fume
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.



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2-methoxy-1-methylethyl acetate	TWA: 50 ppm 8 hours. <b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 548 mg/m <sup>3</sup> 15 minutes. STEL: 100 ppm 15 minutes. TWA: 274 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours.
1-methoxy-2-propanol	<b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b> STEL: 560 mg/m <sup>3</sup> 15 minutes. STEL: 150 ppm 15 minutes. TWA: 375 mg/m <sup>3</sup> 8 hours. TWA: 100 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.

**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
Zinc oxide	DNEL	Long term Dermal	83 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	5 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	83 mg/kg bw/day	Consumers	Systemic
	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
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	DNEL	Long term Dermal	25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	150 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	11 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	32 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Long term Oral	11 mg/kg bw/day	Consumers	Systemic
rosin	DNEL	Long term Dermal	25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	176 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	15 mg/kg bw/day	Consumers	Systemic
	DNEL	Long term Inhalation	52 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Long term Oral	15 mg/kg bw/day	Consumers	Systemic
xylene	DNEL	Short term	289 mg/m <sup>3</sup>	Workers	Systemic

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2-methoxy-1-methylethyl acetate	DNEL	Inhalation Short term	289 mg/m <sup>3</sup>	Workers	Local
	DNEL	Inhalation Long term	180 mg/kg bw/day	Workers	Systemic
	DNEL	Inhalation Long term	77 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Dermal Long term	108 mg/kg bw/day	Consumers	Systemic
	DNEL	Inhalation Long term	14,8 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Oral Long term	1,6 mg/kg bw/day	Consumers	Systemic
	DNEL	Dermal Long term	153,5 mg/ kg bw/day	Workers	Systemic
	DNEL	Inhalation Long term	275 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Dermal Long term	54,8 mg/ kg bw/day	Consumers	Systemic
	DNEL	Inhalation Long term	33 mg/m <sup>3</sup>	Consumers	Systemic
1-methoxy-2-propanol	DNEL	Oral Long term	1,67 mg/ kg bw/day	Consumers	Systemic
	DNEL	Inhalation Short term	553,5 mg/ m <sup>3</sup>	Workers	Local
	DNEL	Dermal Long term	50,6 mg/ kg bw/day	Workers	Systemic
	DNEL	Inhalation Long term	369 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Dermal Long term	18,1 mg/ kg bw/day	Consumers	Systemic
	DNEL	Inhalation Long term	43,9 mg/m <sup>3</sup>	Consumers	Systemic
ethylbenzene	DNEL	Oral Long term	3,3 mg/kg bw/day	Consumers	Systemic
	DNEL	Inhalation Short term	293 mg/m <sup>3</sup>	Workers	Local
	DNEL	Dermal Long term	180 mg/kg bw/day	Workers	Systemic
	DNEL	Inhalation Long term	77 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Inhalation Long term	15 mg/m <sup>3</sup>	Consumers	Systemic
	DNEL	Oral Long term	1,6 mg/kg bw/day	Consumers	Systemic

**Predicted no effect concentrations**

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
copper oxide	PNEC	Fresh water	7,8 µg/l	-
	PNEC	Marine	5,2 µg/l	-
	PNEC	Sewage Treatment Plant	230 µg/l	-
zinc oxide	PNEC	Fresh water sediment	87 mg/kg dwt	-
	PNEC	Marine water sediment	676 mg/kg dwt	-
	PNEC	Soil	65 mg/kg dwt	-
	PNEC	Fresh water	20,6 µg/l	-
	PNEC	Marine	6,1 µg/l	-
	PNEC	Sewage Treatment Plant	52 µg/l	-
rosin	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	-
	PNEC	Fresh water	0,0054 mg/l	-
	PNEC	Marine	0,00054 mg/l	-
	PNEC	Sewage Treatment Plant	1000 mg/l	-



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xylene	PNEC	Fresh water sediment	0,02 mg/kg dwt	-
	PNEC	Marine water sediment	0,002 mg/kg dwt	-
	PNEC	Soil	0,0015 mg/kg dwt	-
	PNEC	Fresh water	0,327 mg/l	-
	PNEC	Marine	0,327 mg/l	-
	PNEC	Sewage Treatment Plant	6,58 mg/l	-
2-methoxy-1-methylethyl acetate	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	-
	PNEC	Fresh water	0,635 mg/l	-
	PNEC	Marine	0,0635 mg/l	-
	PNEC	Sewage Treatment Plant	100 mg/l	-
1-methoxy-2-propanol	PNEC	Fresh water sediment	3,29 mg/kg dwt	-
	PNEC	Marine water sediment	0,329 mg/kg dwt	-
	PNEC	Soil	0,29 mg/kg dwt	-
	PNEC	Fresh water	10 mg/l	-
	PNEC	Marine	1 mg/l	-
	PNEC	Sewage Treatment Plant	100 mg/l	-
ethylbenzene	PNEC	Fresh water sediment	52,3 mg/kg dwt	-
	PNEC	Marine water sediment	5,2 mg/kg dwt	-
	PNEC	Soil	5,49 mg/kg dwt	-
	PNEC	Fresh water	0,1 mg/l	-
	PNEC	Marine	0,01 mg/l	-
	PNEC	Sewage Treatment Plant	9,6 mg/l	-
	PNEC	Fresh water sediment	13,7 mg/kg dwt	-
	PNEC	Soil	2,68 mg/kg dwt	-
	PNEC	Secondary Poisoning	20 mg/kg	-

**8.2 Exposure controls**

**Appropriate engineering controls**

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

**Individual protection measures**

**Hygiene measures**

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. 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 with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

**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.

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May be used, gloves(breakthrough time) 4 - 8 hours: neoprene, butyl rubber, PVC  
 Recommended, gloves(breakthrough time) > 8 hours: Viton®, nitrile rubber, Teflon, 4H, polyvinyl alcohol (PVA)

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

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use respiratory mask with charcoal and dust filter when spraying this product.(as filter combination A2-P2). In confined spaces, use compressed-air or fresh-air respiratory equipment. When use of roller or brush, consider use of charcoalfilter.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties**Appearance

- Physical state** : Liquid.
- Colour** : Various colours.
- Odour** : Characteristic.
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not applicable.
- Initial boiling point and boiling range** : Lowest known value: 120°C (248°F) (1-methoxy-2-propanol). Weighted average: 138.33°C (281°F)
- Flash point** : Closed cup: 28°C
- Evaporation rate** : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.63 compared with butyl acetate
- Flammability (solid, gas)** : Not applicable.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Upper/lower flammability or explosive limits** : 1.1 - 13.1%
- Vapour pressure** : Highest known value: 1.2 kPa (9 mm Hg) (at 20°C) (1-methoxy-2-propanol). Weighted average: 0.75 kPa (5.63 mm Hg) (at 20°C)
- Vapour density** : Highest known value: 4.6 (Air = 1) (2-methoxy-1-methylethyl acetate). Weighted average: 3.92 (Air = 1)
- Relative density** : 0.59 to 1.648 g/cm<sup>3</sup>
- Solubility(ies)** : Insoluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/ water** : Not available.

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## SECTION 9: Physical and chemical properties

- Auto-ignition temperature** : Lowest known value: 270°C (518°F) (1-methoxy-2-propanol).  
**Decomposition temperature** : Not available.  
**Viscosity** :  Kinematic (40°C): >0,225 cm<sup>2</sup>/s (>22,5 mm<sup>2</sup>/s)  
**Explosive properties** : Not available.  
**Oxidising properties** : Not available.

### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.  
**10.2 Chemical stability** : The product is stable.  
**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.  
**10.4 Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.  
**10.5 Incompatible materials** : Reactive or incompatible with the following materials:  
 oxidizing materials  
**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

There are no data available on the mixture itself. The mixture has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 2 and 15 for details.

Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Swallowing may cause nausea, diarrhoea, vomiting, gastro-intestinal irritation and chemical pneumonia.

Contains rosin. May produce an allergic reaction.

Product/ingredient name	Result	Species	Dose	Exposure
<input checked="" type="checkbox"/> copper oxide	LD50 Oral	Rat	470 mg/kg	-
	LD50 Oral	Rat	470 mg/kg	-
xylene	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	8532 mg/kg	-
1-methoxy-2-propanol	LD50 Dermal	Rabbit	13 g/kg	-
	LD50 Oral	Rat	6600 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
<input checked="" type="checkbox"/> Oral	2456,4 mg/kg
Dermal	18959,3 mg/kg
Inhalation (vapours)	157,4 mg/l

### Irritation/Corrosion

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## SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Zinc oxide  1-methoxy-2-propanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1-methoxy-2-propanol	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	ears

### Aspiration hazard

Product/ingredient name	Result
Solvent naphtha (petroleum), light arom. (<0.1% Benzene) ethylbenzene	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Copper oxide	Acute EC50 30 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	4 days
	Acute EC50 0,042 mg/l Fresh water	Daphnia - Daphnia similis	48 hours
	Acute LC50 350 µg/l Marine water	Crustaceans - Balanus improvisus - Nauplii	48 hours
	Acute LC50 173 ppb Marine water	Fish - Cyprinodon variegatus - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Acute LC50 0,075 mg/l Fresh water	Fish - Danio rerio	96 hours
	Chronic IC10 0,009 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	96 hours
zinc oxide	Acute LC50 1,1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	Daphnia	48 hours
ethylbenzene	Acute IC50 <10 mg/l	Algae	72 hours
	Acute LC50 <10 mg/l	Fish	96 hours
	Acute EC50 7,2 mg/l	Algae	48 hours
	Acute EC50 2,93 mg/l	Daphnia	48 hours
	Acute LC50 4,2 mg/l	Fish	96 hours

**Conclusion/Summary** : Water polluting material. May be harmful to the environment if released in large quantities. This material is very toxic to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

**Conclusion/Summary** : Not available.

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## SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
dicopper oxide	-	-	Not readily
zinc oxide	-	-	Not readily
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	-	-	Not readily
xylene	-	-	Readily
ethylbenzene	-	-	Readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
zinc oxide	-	60960	high
Solvent naphtha (petroleum), light arom. (<0.1% Benzene)	-	10 to 2500	high
rosin	1.9 to 7.7	-	high
xylene	3,12	8.1 to 25.9	low
2-methoxy-1-methylethyl acetate	0,56	-	low
1-methoxy-2-propanol	<1	-	low
ethylbenzene	3,15	-	low

### 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.

## SECTION 13: Disposal considerations

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

### 13.1 Waste treatment methods

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

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

## SECTION 14: Transport information

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

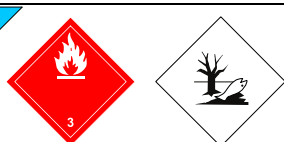
### International transport regulations

**14.1 UN number** : 1263

**14.2 UN proper shipping name** : Paint. Marine pollutant (dicopper oxide, zinc oxide)

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

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**SECTION 14: Transport information**

- 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 73/78 and the IBC Code** : Not available.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**Other EU regulations**

- Europe inventory** : Not determined.
- Black List Chemicals** : Not listed
- Priority List Chemicals** : Not listed
- Integrated pollution prevention and control list (IPPC) - Air** : Not listed
- Integrated pollution prevention and control list (IPPC) - Water** : Not listed
- Chemical Weapons Convention List Schedule I Chemicals** : Not listed
- Chemical Weapons Convention List Schedule II Chemicals** : Not listed



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## SECTION 15: Regulatory information

Chemical Weapons : Not listed  
 Convention List Schedule III  
 Chemicals

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

## SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 PNEC = Predicted No Effect Concentration  
 RRN = REACH Registration Number


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

Classification	Justification
Flam. Liq. 3, H226 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	On basis of test data Calculation method Calculation method Calculation method

**Full text of abbreviated H statements** :  H225 Highly flammable liquid and vapour.  
 H226 Flammable liquid and vapour.  
 H302 Harmful if swallowed.  
 H304 May be fatal if swallowed and enters airways.  
 H312 Harmful in contact with skin.  
 (dermal)  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H332 Harmful if inhaled.  
 (inhalation)  
 H335 May cause respiratory irritation.  
 H336 May cause drowsiness or dizziness.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 (ears) (ears)  
 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, H302 ACUTE TOXICITY (oral) - Category 4  
 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  
 Flam. Liq. 2, H225 FLAMMABLE LIQUIDS - Category 2  
 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3  
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2  
 Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1  
 STOT RE 2, H373 (ears) SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (ears) - Category 2  
 STOT SE 3, H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
 STOT SE 3, H336 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3

**SECTION 16: Other information**

**Full text of abbreviated R phrases** :  R11- Highly flammable.  
 R10- Flammable.  
 R20- Harmful by inhalation.  
 R22- Harmful if swallowed.  
 R20/21- Harmful by inhalation and in contact with skin.  
 R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.  
 R48/20- Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
 R65- Harmful: may cause lung damage if swallowed.  
 R37- Irritating to respiratory system.  
 R38- Irritating to skin.  
 R43- May cause sensitisation by skin contact.  
 R66- Repeated exposure may cause skin dryness or cracking.  
 R67- Vapours may cause drowsiness and dizziness.  
 R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Full text of classifications [DSD/DPD]** : F - Highly flammable  
 Xn - Harmful  
 Xi - Irritant  
 N - Dangerous for the environment

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**Notice to reader**

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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.