



# SAFETY DATA SHEET

according to Regulation (EU) 2020/878

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## Star Mariner Neptune

Revision 7

Revision date 2022-11-29

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

#### 1.1. Product identifier

**Product name** Star Mariner Neptune

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

**Product Use** [SU3] Industrial uses: Uses of substances as such or in preparations at industrial sites; [SU17] General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment;

**Description** Marine Diesel Fuel Treatment.

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

**Company** Star International  
**Address** Star House  
Turbine Industrial Park  
Turbine Road  
Birkenhead  
U.K  
CH41 9BA  
**Web** www.star-international.co.uk  
**Telephone** +44 (0)1244 504500  
**Fax** +44 (0)1244 504509  
**Email** enquiries@star-international.co.uk  
**Email address of the competent person** Jeff.Antley@star-international.co.uk

#### 1.4. Emergency telephone number

**Emergency telephone number** + 44 (0) 1244 504 500

For medical advice or information you should contact your GP or NHS 111 (or NHS 24 in Scotland) on 111 (for 24 hour health advice)

If you are a healthcare professional with an enquiry please visit [www.TOXBASE.org](http://www.TOXBASE.org)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

**2.1.2. Classification - EC 1272/2008** Acute Tox. 4: H302; Acute Tox. 4: H312; Skin Irrit. 2: H315; Eye Irrit. 2: H319;

#### 2.2. Label elements

**Hazard pictograms**



**Signal Word**

Warning

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## 2.2. Label elements

<b>Hazard Statement</b>	Acute Tox. 4: H302 - Harmful if swallowed. Acute Tox. 4: H312 - Harmful in contact with skin. Skin Irrit. 2: H315 - Causes skin irritation. Eye Irrit. 2: H319 - Causes serious eye irritation.
<b>Precautionary Statement: Prevention</b>	P280 - Wear protective gloves/protective clothing/eye protection/face protection.
<b>Precautionary Statement: Response</b>	P301+P310+P330+P331 - IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth. Do NOT induce vomiting. P302+P352 - IF ON SKIN: Wash with plenty of water/ . P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Precautionary Statement: Disposal</b>	P501 - Dispose of contents/container to an approved disposal site, in accordance with local regulations.
<b>SUPPLEMENTAL HAZARD INFORMATION</b>	Contains - 2-butoxyethanol, 2-Ethyl-1-hexanol.

## 2.3. Other hazards

<b>Other hazards</b>	This substance/mixture is not classified as PBT or vPvB according to current criteria. The substance/mixture does not contain substances with endocrine disrupting properties.
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## Further information

	RECOMMENDED SHELF LIFE 1 YEAR FROM DATE OF DELIVERY.
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## SECTION 3: Composition/information on ingredients

## 3.2. Mixtures

## EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
2-butoxyethanol	603-014-00-0	111-76-2	203-905-0	01-2119475108-36	60 - 70%	Acute Tox. 4: H332; Acute Tox. 4: H312; Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315;
2-Ethyl-1-hexanol (2-ethylhexan-1-ol)		104-76-7	203-234-3	01-2119487289-20	1 - 10%	Skin Irrit. 2: H315; Eye Irrit. 2: H319; Acute Tox. 4: H332; STOT SE 3: H335;

## SECTION 4: First aid measures

## 4.1. Description of first aid measures

<b>Inhalation</b>	Move the exposed person to fresh air.
<b>Eye contact</b>	Rinse immediately with plenty of water. Contact lenses should be removed.
<b>Skin contact</b>	Remove contaminated clothing. Wash with water and soap as a precaution.
<b>Ingestion</b>	DO NOT INDUCE VOMITING. Rinse mouth thoroughly.

## 4.2. Most important symptoms and effects, both acute and delayed

<b>Inhalation</b>	Harmful by inhalation. May cause irritation to respiratory system.
<b>Eye contact</b>	Harmful. Causes serious eye irritation.
<b>Skin contact</b>	Harmful in contact with skin. Causes skin irritation.
<b>Ingestion</b>	Harmful if swallowed. May cause irritation to mucous membranes.

## 4.3. Indication of any immediate medical attention and special treatment needed

<b>Inhalation</b>	Move the exposed person to fresh air. Seek medical attention. Show this safety data sheet to the doctor in attendance.
<b>Eye contact</b>	Contact lenses should be removed. Rinse immediately with plenty of water. Seek medical attention. Show this safety data sheet to the doctor in attendance.

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**4.3. Indication of any immediate medical attention and special treatment needed**

Skin contact	Remove contaminated clothing. Seek medical attention. Show this safety data sheet to the doctor in attendance.
Ingestion	If swallowed, seek medical advice immediately and show this container or label. Show this safety data sheet to the doctor in attendance.

**General information**

	If you feel unwell, seek medical advice (show the label where possible). Treat symptomatically.
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**SECTION 5: Firefighting measures****5.1. Extinguishing media**

	This product is not flammable . Use fire-extinguishing media appropriate for surrounding materials.  Do not use water jet as an extinguisher, as this will spread the fire.
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**5.2. Special hazards arising from the substance or mixture**

	Oxides of the following substances: Carbon.
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**5.3. Advice for firefighters**

	Fire fighters should wear self contained positive pressure breathing apparatus (SCBA) and full turnout gear.
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**Further information**

	In the event of a fire and/or explosion do not breath fumes. Standard procedure for chemical fires. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

	Wear suitable protective equipment. Avoid contact with eyes and skin. Avoid inhalation of vapour or spray/mist. Provide adequate ventilation.
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**6.2. Environmental precautions**

	Advise local authorities if large spills cannot be contained.
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**6.3. Methods and material for containment and cleaning up**

	For large spills:. Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water. For small spills:. Flush down the drain with plenty of water.
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**6.4. Reference to other sections**

	See section 2, 7, 8, 13 for further information.
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**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

	Avoid contact with eyes and skin. Do not breathe vapours or spray mist. Adopt best Manual Handling considerations when handling, carrying and dispensing. Provide adequate ventilation.
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**7.2. Conditions for safe storage, including any incompatibilities**

	Store in a cool, dry area. Keep container tightly closed. Keep out of the reach of children. Store in original container.
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**7.3. Specific end use(s)**

	Marine Diesel Fuel Treatment.
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**Suitable packaging**

	Plastic containers.
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**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

Occupational exposure controls.

**8.1.1. Exposure Limit Values**

2-butoxyethanol	WEL 8-hr limit ppm: 25	WEL 8-hr limit mg/m <sup>3</sup> : 123
	WEL 15 min limit ppm: 50	WEL 15 min limit mg/m <sup>3</sup> : 101.2
	WEL 8-hr limit mg/m <sup>3</sup> total - inhalable dust:	WEL 15 min limit mg/m <sup>3</sup> total - inhalable dust:
	WEL 8-hr limit mg/m <sup>3</sup> total - respirable dust:	WEL 15 min limit mg/m <sup>3</sup> total - respirable dust:
2-Ethyl-1-hexanol (2-ethylhexan-1-ol)	DIR: 2017/164	8hTWA mg/m <sup>3</sup> : 5.4
	8hTWA ppm: 1	STEL mg/m <sup>3</sup> : -
	STEL ppm: -	NOT: -

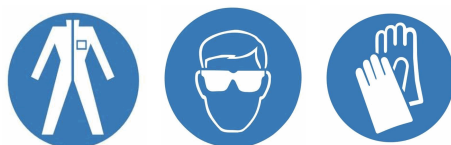
DNEL: Derived no-effect level.

**Exposure Pattern - Workers**

2-butoxyethanol	Acute inhalation - Systemic effects	1091 mg/m <sup>3</sup>	Acute dermal - Systemic effects	89 mg/kg	
	Acute inhalation - Local effects	246 mg/m <sup>3</sup>		Long-term - dermal - Systemic effects	125 mg/kg
	Long-term - inhalation - Systemic effects	98 mg/m <sup>3</sup>			

**Exposure Pattern - General population**

2-butoxyethanol	Acute inhalation - Systemic effects	426 mg/m <sup>3</sup>	Acute oral - Systemic effects	26.7 mg/kg	
	Acute dermal - Systemic effects	89 mg/kg		Long-term - inhalation - Local effects	147 mg/m <sup>3</sup>
	Long-term - inhalation - Systemic effects	59 mg/m <sup>3</sup>		Long-term - oral - Systemic effects	6.3 mg/kg
	Long-term - dermal - Systemic effects	75 mg/kg			

**8.2. Exposure controls**

Adopt best Manual Handling considerations when handling, carrying and dispensing. Avoid contact with skin and eyes. Handle in accordance with good industrial hygiene and safety practice. Use appropriate personal protective equipment. Wear suitable protective clothing and eye/face protection.

**8.2.1. Appropriate engineering controls**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective threshold limit value. Ensure eyewash stations and safety showers are close to the workstation location.

**Eye / face protection**

Approved safety goggles. Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Wear chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

**Skin protection - Handprotection**

Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove

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## 8.2. Exposure controls

Skin protection - Other	manufacturer.
	Wear suitable protective clothing.
Respiratory protection	No personal respiratory protective equipment normally required. In case of insufficient ventilation wear suitable respiratory equipment.
8.2.3. Environmental exposure controls	Prevent further leakage or spillage if safe to do so.

## SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Amber
Odour	Characteristic
Odour threshold	No data available
pH	No data available
Melting point	No data available
Initial boiling point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Vapour pressure	No data available
Relative Vapour Density	No data available
Density / Relative Density	0.88 - 0.92 (H <sub>2</sub> O = 1 @ 20 °C)
Partition coefficient	No data available
Autoignition temperature	No data available
Viscosity	< 100 centipoise
Explosive properties	No data available
Oxidising properties	No data available
Solubility	Soluble in water

## 9.2. Other information

Surface tension	No data available
Gas group	No data available
Benzene Content	No data available
Lead content	No data available
VOC (Volatile organic compounds)	No data available
Conductivity	No data available

## 9.2.1. Information with regard to physical hazard classes

	No data is available on this product.
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## 9.2.2. Other safety characteristics

	No data is available on this product.
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## SECTION 10: Stability and reactivity

## 10.1. Reactivity

	Stable under normal conditions.
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## 10.2. Chemical stability

	Stable under normal conditions.
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## 10.3. Possibility of hazardous reactions

	Will not polymerise.
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## 10.4. Conditions to avoid

Avoid excessive heat for prolonged periods of time.

## 10.5. Incompatible materials

Strong acids. Strong oxidising agents.

## 10.6. Hazardous decomposition products

No Hazardous decomposition products when stored and handled correctly.

## SECTION 11: Toxicological information

## 11.1 Information on hazard classes

Acute toxicity	This mixture has not been tested as a whole for health effects. The health effects have been calculated using the methods outlined in Regulation (EC) No 1272/2008 (CLP).
	Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled. Oral ATE = 1990.8 mg/kg. Dermal ATE = 1684.5 mg/kg. Inhalation - Dust/Mist ATE = 13.9 mg/l.
Skin corrosion/irritation	Skin Irrit. 2: H315 - Causes skin irritation.
Serious eye damage/irritation	Eye Irrit. 2: H319 - Causes serious eye irritation.
Respiratory or skin sensitisation	based on available data the classification criteria are not met.
Germ cell mutagenicity	based on available data the classification criteria are not met.
Carcinogenicity	based on available data the classification criteria are not met.
Reproductive toxicity	based on available data the classification criteria are not met.
STOT-single exposure	based on available data the classification criteria are not met.
STOT-repeated exposure	based on available data the classification criteria are not met.
Aspiration hazard	based on available data the classification criteria are not met.
Repeated or prolonged exposure	based on available data the classification criteria are not met.

## 11.1.2. Mixtures

No data available.

## 11.1.3. Hazard Information

No data available.

## 11.1.4. Toxicological Information

2-butoxyethanol	Dermal Rat LD50: 1100 mg/kg Inhalation Rat LC50/4 h: 11.0 mg/l	Oral Rat LD50: 1300 mg/kg
2-Ethyl-1-hexanol	Inhalation Rat LC50/4 h: >0.89mg/l Oral Rat LD50: 2047mg/kg	Dermal Rat LD50: >3000mg/kg

## 11.2 Information on other hazards

No data is available on this product.

## SECTION 12: Ecological information

## 12.1. Toxicity

2-butoxyethanol	Daphnia EC50/48h: 1550.0000 mg/l Rainbow trout LC50/96h: 1474 mg/l EC50 for marine or freshwater organisms >100.0000 mg/l	Algae EC50/72h: 1840 mg/l LC50 for marine or freshwater organisms >100.0000 mg/l
2-Ethyl-1-hexanol	Daphnia EC50/48h: 39.0000 mg/l Algae EC50/72h: 11.5 mg/l	Fish LC50/96h: 28.2000 mg/l

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## 12.2. Persistence and degradability

Substance biodegrades at a moderate rate and inherently biodegradable according to the OECD guide lines.

## 12.3. Bioaccumulative potential

This product does not contain any substances expected to be bioaccumulating.

## Partition coefficient

<b>Star Mariner Neptune</b>	No data available	<b>2-butoxyethanol</b>	0.8 log P
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## 12.4. Mobility in soil

The product is water-soluble.

## 12.5. Results of PBT and vPvB assessment

This substance/mixture is not classified as PBT or vPvB according to current criteria.

## 12.6 Endocrine disrupting properties

No data is available on this product.

## 12.7. Other adverse effects

No data is available on this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

## General information

Dispose of in compliance with all local and national requirements.

## Disposal of packaging

Do NOT reuse empty containers. Empty containers can be sent to landfill after cleaning, if in compliance with local and national regulations.

## SECTION 14: Transport information

### 14.1. UN number

The product is not classified as dangerous for carriage.

### 14.2. UN proper shipping name

The product is not classified as dangerous for carriage.

### 14.3. Transport hazard class(es)

The product is not classified as dangerous for carriage.

### 14.4. Packing group

The product is not classified as dangerous for carriage.

### 14.5. Environmental hazards

The product is not classified as dangerous for carriage.

### 14.6. Special precautions for user

The product is not classified as dangerous for carriage.

### 14.7 Maritime Transport in bulk according to IMO instruments

The product is not classified as dangerous for carriage.

## SECTION 15: Regulatory information

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

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

<b>Regulations</b>	<p>REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.</p> <p>COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.</p> <p>COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).</p>
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## 15.2. Chemical safety assessment

	No information available.
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## SECTION 16: Other information

## Other information

<b>Revision</b>	<p>This document differs from the previous version in the following areas:.</p> <ul style="list-style-type: none"> <li>2 - Other hazards.</li> <li>2 - 2.1.2. Classification - EC 1272/2008.</li> <li>2 - Further information.</li> <li>2 - SUPPLEMENTAL HAZARD INFORMATION.</li> <li>9 - 9.2.2. Other safety characteristics.</li> <li>9 - 9.2.1. Information with regard to physical hazard classes.</li> <li>10 - 10.2. Chemical stability.</li> <li>10 - 10.1. Reactivity.</li> <li>11 - Acute toxicity.</li> <li>11 - Repeated or prolonged exposure.</li> <li>11 - 11.2 Information on other hazards.</li> <li>12 - 12.1. Toxicity.</li> <li>12 - 12.6 Endocrine disrupting properties.</li> <li>12 - 12.7. Other adverse effects.</li> <li>15 - Regulations.</li> </ul>
<b>Data sources</b>	<p>Classification and Procedure used to derive the classification for mixtures according to Regulation (EC) No. 1272/2008, as retained and amended in UK law.</p> <p>Acute Tox. 4: H302 - Harmful if swallowed. - Calculation Method.</p> <p>Acute Tox. 4: H312 - Harmful in contact with skin. - Calculation Method.</p> <p>Skin Irrit. 2: H315 - Causes skin irritation. - Calculation Method.</p> <p>Eye Irrit. 2: H319 - Causes serious eye irritation. - Calculation Method.</p> <p>Acute Tox. 4: H332 - Harmful if inhaled. - Calculation Method.</p>
<b>Text of Hazard Statements in Section 3</b>	<p>Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled</p> <p>Skin Irrit. 2: H315 - Causes skin irritation.</p> <p>Eye Irrit. 2: H319 - Causes serious eye irritation.</p> <p>Acute Tox. 4: H332 - Harmful if inhaled.</p> <p>STOT SE 3: H335 - May cause respiratory irritation.</p>

## Further information

	<p>The information supplied in this Safety Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in</p>
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**Further information**

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	combination with any other materials or in any other process.
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