



SAFETY DATA SHEET

Optima Marine 2 Stroke

Product Code: M298

SECTION 1 IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF COMPANY/UNDERTAKING

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| 1.1 Product Identifier | Optima Marine 2 Stoke |
| Product Code | M298 |
| 1.2 Relevant identified uses of the substance or mixture and uses advised against | Lubricant for marine two-stroke engines requiring TC-W3 quality. Do not use in any other application. |
| 1.3 Company | Exol Lubricants Limited All Saints Road Wednesbury, West Midlands, WS10 9TS |
| 1.4 Emergency Telephone Number | +44 (0) 121 568 6800 (Monday – Friday 08.30 – 17.00 hrs GMT) |
| 1.5 Other Information | Preparation Date: 26/09/18 |

SECTION 2 HAZARD IDENTIFICATION

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|--|--|
| 2.1 Classification of the substance or mixture | Not classified as hazardous in accordance with CLP (EC 1272/2008) and DPD (1999/45/EC) |
| 2.2 Label Elements | No labelling required |
| 2.3 Other Hazards | Not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 DMSO test. |

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

| Component | EC No. | REACH Reg. No. | GHS Classification | Conc. % |
|---|-----------|------------------|--|---------|
| Distillates (petroleum), hydrotreated light | 265-149-8 | 01-2119484819-18 | Asp. Tox. 1; H304 | 10-15 |
| Long chain alkyl polyamide | Polymer | Not Available | Eye Irrit. 2; H319 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Chronic 3; H412 | <9 |
| Solvent naphtha (petroleum), heavy aromatic | 265-198-5 | Not Available | Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411 EUH066 | <0.5 |

Other Information

It is understood from toxicological information given for the components present that at the treatment rate used in the finished oil; the material is not expected to cause allergic skin reactions.

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

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| Inhalation | If inhalation of mists, fumes or vapour causes irritation to the nose or throat, or coughing, remove to fresh air. If symptoms persist obtain medical advice. |
| Eyes | Wash eye thoroughly with copious quantities of water, ensuring eyelids are held open. Obtain medical advice if any pain or redness develops or persists. |
| Skin | Wash skin thoroughly with soap and water as soon as reasonably practicable. Remove heavily contaminated clothing and wash underlying skin. |
| Ingestion | If contamination of the mouth occurs, wash out thoroughly with water. Except as a deliberate act, the ingestion of large amounts of product is unlikely. If it should occur, do not induce vomiting; obtain medical advice. |

4.2 Most important symptoms and effects, both acute and delayed No ill effects known

4.3 Indication of immediate medical attention and special treatment needed, if necessary Eye contact: immediately wash out with plenty of water



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SECTION 5 FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media Foam, dry powder or water fog. Water can be used to cool and protect exposed material.
- 5.2 Specific hazards arising from the substance or mixture Toxic fumes may be evolved on burning or exposure to heat. See Stability and Reactivity, Section 10 of this Safety Data Sheet.
- 5.3 Advice for fire-fighters Wear self-contained breathing apparatus. Water may cause splattering.

SECTION 6 ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures Immediately evacuate all personnel from danger area. Wear Personal Protective Equipment. Eliminate all sources of heat, sparks, pilot lights, static electricity and open flames. Spilled material may make surfaces slippery.
- 6.2 Environmental precautions Protect drains from potential spills to minimise contamination. Do not wash product into drainage system.
In the case of large spills contact the appropriate authorities. In the case of spillage on water, prevent the spread of product by the use of suitable barrier equipment. Recover product from the surface. Protect environmentally sensitive areas and water supplies.
- 6.3 Methods and material for containment and cleaning up Absorb into dry earth or sand. Protect drains using drain covers. Dispose of as hazardous waste.
- 6.4 Reference to other sections Personal protective equipment: See section 8

SECTION 7 HANDLING AND STORAGE

- 7.1 Precautions for safe handling Avoid contact with eyes. If splashing is likely to occur wear a full face visor or chemical goggles as appropriate. Avoid frequent or prolonged skin contact with fresh or used product.
Good working practices, high standards of personal hygiene and plant cleanliness must be maintained at all times. Wash hands thoroughly after contact. Use disposable cloths and discard when soiled. Do not put soiled cloths into pockets.
Use a suitable barrier cream at regular intervals.
- 7.2 Conditions for safe storage, including any incompatibilities Keep out of the reach of children.
- 7.3 Specific end use(s) Store under cover away from heat and sources of ignition.
Intended for use as a lubricant for marine two-stroke engines requiring TC-W3 quality.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters

| Country | Substance | Long Term (8 Hours TWA) | Short Term (15 Mins) |
|---------|-----------|-------------------------|----------------------|
| None | | | |
- 8.2 Exposure controls Use local exhaust ventilation to control mists or vapours.
Hand Protection: Nitrile or neoprene protective gloves
Eye Protection: Safety glasses
Skin Protection: Protective clothing
Hygiene Measures: Wash thoroughly after handling this product

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Information on basic physical and chemical properties Does not constitute a specification
- | Typical Values | Units | Optima Marine 2 Stroke |
|---------------------------------|-------|------------------------|
| Grades: | | |
| Appearance | | Blue Liquid |
| Odour | | Oily |
| Odour Threshold | | No data available |
| pH | | Not applicable |
| Pour point/range | °C | -28 |
| Initial boiling point and range | °C | No data available |
| Flash point (COC) | °C | 120 |
| Flammability | | Not flammable |



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| Upper/lower flammability or explosive limits | | Not applicable |
| Vapour pressure | kPa (0.1 mm Hg) | No data available |
| Relative density | kg/m ³ | 0.890 @ 20°C |
| Solubility | | Insoluble |
| - water | | Soluble |
| - Fat/solvents | | Not applicable |
| Partition coefficient n-octanol/water | Log Pow | No data available |
| Autoignition temperature | | No data available |
| Decomposition temperature | | 147.97 @ 40°C |
| Viscosity | mm ² /s | 17.89 @ 100°C |
| | mm ² /s | Not applicable |
| Evaporation rate | | Not applicable |
| Vapour density | | Not applicable |
| Explosive properties | | Not applicable |
| Oxidising properties | | None |

9.2 Other Information None

SECTION 10 STABILITY AND REACTIVITY

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|---|---|
| 10.1 Reactivity | No dangerous reactions known |
| 10.2 Chemical stability | Stable under normal conditions of use |
| 10.3 Possibility of hazardous reactions | None known |
| 10.4 Conditions to avoid | Avoid overheating. |
| 10.5 Incompatible materials | Avoid contact with strong oxidising agents |
| 10.6 Hazardous decomposition products | Thermal decomposition products will vary with conditions. Incomplete combustion will generate smoke, carbon dioxide and hazardous gases, including carbon monoxide. |

SECTION 11 TOXICOLOGICAL INFORMATION

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|---|---|
| 11.1 Information on toxicological effects | |
| Acute Toxicity | |
| - Oral | No toxic components present at levels to cause classification. |
| - Inhalation | No toxic components present at levels to cause classification. |
| - Dermal | No toxic components present at levels to cause classification. |
| Corrosivity/Irritation | |
| - Eye | No components present that are classified as eye irritants. |
| - Skin | No components present that are classified as skin irritants but may cause skin irritation due to de-fatting effect on skin. |
| - Respiratory Tract | No components present that are classified as respiratory irritants. |
| Sensitisation | |
| - Skin | No evidence of sensitisation effects. |
| - Respiratory | No evidence of sensitisation effects. |
| Repeated-dose Toxicity | No data available. |
| Mutagenicity | No evidence of mutagenicity. |
| Carcinogenicity | No evidence of carcinogenicity. |
| Reproductive Toxicity | No evidence of reproductive toxicity. |

SECTION 12 ECOLOGICAL INFORMATION

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|---|---|
| 12.1 Toxicity | Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired |
| 12.2 Persistence and Degradability | Not biodegradable. |
| 12.3 Bioaccumulative Potential | There is no evidence to suggest bioaccumulation will occur. |
| 12.4 Mobility in Soil | Spillages may penetrate the soil causing ground water contamination. Non-volatile. |
| 12.5 Results of PBT and vPvB Assessment | No PBT or vPvB chemicals present. |
| 12.6 Other Adverse Effects | None known. |



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SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Where possible, arrange for product to be recycled.

Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Incineration may be carried out under controlled conditions provided that local regulations for emissions are met.

SECTION 14 TRANSPORT INFORMATION

Not classified as hazardous for transport (ADR, RID, UN, IMO, and IATA/ICAO).

SECTION 15 REGULATORY INFORMATION

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

Supply regulations: DPD: Dangerous Preparations Directive; GHS: Globally Harmonised System of classification and labelling of chemicals; CLP: Classification, Labelling and Packaging regulations.

Transport regulations: CDG: Carriage of Dangerous Goods regulations; ADR/RID/IMDG/ICAO/IATA regulations.

No formal chemical safety assessment has been carried out.

15.2 Chemical Safety Assessment

SECTION 16 OTHER INFORMATION

Fifth Issue September 2018: Changed name

Fourth Issue February 2017: Changed to new format.

Third version March 2015: Changed Product Name

Second Issue October 2013: Changed to new format.

First version March 2004: Changed to Reach version 2 format

Full text of classification data in sections 2 and 3

Asp. Tox. 1; H304

Aspiration hazard, Hazard Category 1; May be fatal if swallowed and enters airways

Eye Irrit. 2; H319

Serious eye damage/irritation, Hazard Category 2; Causes serious eye irritation

Skin Irrit. 2; H315

Skin corrosion/irritation, Hazard Category 2; Causes skin irritation

Skin Sens. 1; H317

Sensitisation, Skin, Hazard Category 1; May cause an allergic skin reaction

STOT SE 3; H336

Specific target organ toxicity, single exposure: Narcotic effects, Hazard Category 3; May cause drowsiness or dizziness

Aquatic Chronic 2; H411

Hazardous to the aquatic environment, long-term hazard, Hazard Category 2; Toxic to aquatic life with long lasting effects

Aquatic Chronic 3; H412

Hazardous to the aquatic environment, long-term hazard, Hazard Category 3; Harmful to aquatic life with long lasting effects

EUH066

Repeated exposure may cause skin dryness or cracking