

SAFETY DATA SHEET

Date: 26 May 2005

Version: 2

Revision: 2

1. Identification of the substance/preparation and company/undertaking

Product name	Yamaha Sterndrive Diesel Engine Oil 15W40 (High Grade)
Use	Diesel engine oil
Supplier	YAMAHA MOTOR DISTRIBUTION B.V. Bellingel 2, 1119 NV Schiphol-Rijk P.O. Box 75175, 1117 ZS Schiphol - Olanda
Telephone	+31 (0)20-654.65.43
Telefax	+31 (0)20-654.65.65
Emergency telephone	+31 (0)30-274.88.88 (Central Toxicology Utrecht)

2. Composition/information on ingredients

Hazardous components	Conc (%)	EC No	Classification^a
Calcium branched chain alkyl phenate sulfide	<2	291-829-9	R53
Polyolefin polyamine succinimide, polyol	<2	polymer	R53
Zinc alkyl dithiophosphate	<2	272-028-3	Xi, R41; N, R51/53
Calcium long chain alkaryl sulfonate	<2	271-877-7 and 290-636-7	Xi, R43; R53
Polyolefin polyamine succinimide, borated	<1	polymer	N, R51/53
Non-hazardous components			
Base oil mixture ^b	>80	—	Not classified
Other additives	<20	—	Not classified

^a See Section 16 'Other information' for full text of the R-phrases.^b DMSO extract of petroleum oil <3% (IP 346)

3. Hazards identification

Classification	Xi, R43
Health hazards	The product is classified as a skin sensitiser. Vapour or mist in unusually high concentrations, for example generated from spraying, or heating the product, or from use in poorly ventilated or confined spaces, may cause irritation of the nose and throat, headache, nausea and drowsiness.
Environmental hazards	The product is not classified as harmful.
Fire and explosion hazards	The product is considered non-flammable on the basis of its flash point. Product does not have explosive properties.

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4. First-aid measures

Inhalation	Remove exposed person to fresh air if adverse effects (eg dizziness, drowsiness, or respiratory irritation) occur. Obtain medical attention for symptoms of difficulty in breathing.
Skin contact	Wash affected area with soap and water. Get medical attention if irritation occurs. Launder contaminated clothing before re-use.
Eye contact	In case of contact with eyes, irrigate with water for 15 minutes. Seek medical advice, especially if irritation occurs or symptoms persist.
Ingestion	If swallowed, wash out mouth thoroughly and give water to drink. Seek medical attention and show this safety data sheet. Do not induce vomiting, unless instructed by medical personnel.
Medical treatment	Give symptomatic treatment and supportive therapy.

5. Fire-fighting measures

Fire and explosive properties	The product is not flammable, but may burn if involved in a fire. The product does not have explosive properties.
Extinguishing media	Carbon dioxide, dry chemical and foam are recommended. Be aware that product will float on water. Water jets may spread fire, or cause splattering. Remove containers from fire or cool them with water.
Specific hazards	When burned, product forms smoke, and toxic fumes, gases or vapours.
Protective equipment for fire fighters	Fire fighters should wear an approved self-contained breathing apparatus and full protective clothing.

6. Accidental release measures

Personal precautions	Wear appropriate protective clothing (See Section 8), including respiratory protection, during removal of large spillages.
Environmental precautions	Product is not classified as environmentally hazardous. Prevent leakage of into the drainage system by diking with sand or other absorbent material. In the event of spillage, contact the emergency services and local authorities.
Method for cleaning up	Stop the source of leak or release. Clean up spill as soon as possible, using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate,

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remove contaminated soil. Collect spill for disposal and place in suitable container for disposal in accordance with local and national regulations. Wash contaminated surfaces with detergent. Follow prescribed procedures for responding to larger spills and reporting to appropriate authorities.

7. Handling and storage

Information for safe handling Wear protective clothing as in Section 8. Do not weld, heat or drill container. Replace cap or bung. Maintain minimum feasible handling temperature. Water contamination should be avoided. Caution: do not use pressure to empty drum, or drum may rupture with explosive force. Emptied container may still contain hazardous material, which may ignite with explosive violence if heated sufficiently.

Storage

Periods of exposure to high temperatures should be minimized. Keep container closed when not in use.

8. Exposure controls/personal protection

Engineering measures No special ventilation is usually necessary. Good general ventilation is recommended. However, if operating conditions create high airborne concentrations, appropriate local exhaust ventilation may be needed.

Personal protective equipment Avoid skin contact by wearing chemical resistant gloves (eg nitrile). Wear chemical safety goggles or face shield if splashing possible. Where more extensive contact may occur, wear suitable protective clothing (eg apron, sleeves, boots). Wear suitable respiratory protective equipment (breathing mask) if exposure to vapour is likely. PPE should be to European (EN) standards; consult manufacturers concerning breakthrough times.

UK Workplace exposure limits

No component has a workplace exposure limit.

9. Physical and chemical properties

Appearance	Brown liquid
Odour	Slight
Pour point	-27.5 °C
Boiling range	No data available
Flash point (typical)	200 °C (COC)
Explosive properties	None identified

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Autoignition temperature	No data available
Vapour pressure	No data available
Density	0.886 g/cm ³ at 15 °C
Solubility: in water	Insoluble
Partition coefficient	No data available
Viscosity	No data available

10. Stability and reactivity

Stable under recommended storage and handling conditions. No hazardous polymerisation.

Conditions to avoid Avoid prolonged storage at high temperature.

Materials to avoid Acids, oxidising agents, acids, halogens and halogenated compounds.

Hazardous decomposition products Thermal decomposition may produce smoke, carbon monoxide, aldehydes and other products of incomplete combustion. Hydrogen sulfide and alkyl mercaptans and sulfides may also be released. Under combustion conditions, oxides of the following elements will also be formed: calcium, sulfur, and zinc.

11. Toxicological information

The product has not been tested for toxicological effects.

Acute toxicity LD₅₀ believed to be > 5000 mg/kg (practically non-toxic).
Ingestion may cause abdominal discomfort, nausea, or diarrhoea. Dermal toxicity believed to be > 3000 mg/kg.
Vapour or mist may cause, headache, nausea and drowsiness.

Corrosivity/irritation Vapours or mist may cause irritation of the nose and throat.
Liquid may produce mild irritation of the skin or eyes.

Sensitisation Product is assumed to be a skin sensitiser on the basis that a component, present at > 1%, has been classified for sensitising properties.

Repeated-dose toxicity Prolonged exposure may result in nausea, headache, diarrhoea, and physical discomfort.

Mutagenicity/Carcinogenicity/Reproductive toxicity No component is known to have these hazardous properties.

12. Ecological information

Mobility The product is an insoluble liquid, and floats on water.

Persistence/degradability No information available.

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Bioaccumulation

No information available

Toxicity

The product is not classified as dangerous for the environment, but some components, present at low levels, are toxic to aquatic organisms, and may cause long-term effects.

13. Disposal considerations

Disposal must be in accordance with current national and local regulations. Chemical residues generally count as special waste, and their disposal may be regulated in the EC member countries through corresponding laws and regulations. General EU requirements are given in the Waste Framework Directive (75/442/EEC) and the Hazardous Waste Directive (91/689/EEC).

Containers of this material may be hazardous when emptied due to solid or vapor residue. All hazard precautions given in this data sheet must be observed for empty containers.

14. Transport information

Not classified for transport.

15. Regulatory information

Classification and labelling according to EC Directives

Classification

Xi, R43

Symbol and indication

of danger:

Xi, irritant

Risk phrases:

R43, may cause sensitisation by skin contact

Safety phrases:

S24, avoid contact with skin

S37, wear suitable gloves

Contains:

Calcium long chain alkaryl sulfonate

European Directives on chemical control:

EU Directive 67/548/EEC (Dangerous Substances Directive), and 99/45/EC (Dangerous Preparations Directive) with amendments.

This Safety Data Sheet is based on EU Directive 2001/58/EC.

Personal protective equipment (PPE): 89/686/EEC.

European occupational exposure limits: 2000/39/EC.

Protection of health and safety of workers: 98/24/EC.

16. Other information



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Risk phrase explanations: R41, risk of serious damage to eyes; R43, may cause sensitisation by skin contact; R51, toxic to aquatic organisms; R53, may cause long-term adverse effects in the aquatic environment.

The product is classified according to the calculation method given in 99/45/EC. Components are classified according to Annex 1 of 67/548/EEC, or are self-classified according to Annex VI of 67/548/EEC on the basis of available information.

References

1. Handbook of Toxic and Hazardous Chemicals and Carcinogens (2nd ed.)
2. Registry of Toxic Effects of Chemical Substances (NIOSH, 1983).