

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 1: Identification of the Substance or Mixture and of the Supplier

Product Name	ENGINE OIL 15W-40 DH-1
Other means of identification	
Number	CDR
Substance/mixture	Mixture
Recommended use of the chemical and restrictions on use	
Identified uses	Engine oil.
Uses advised against	Do not use for any purpose other than the one for which it is intended.
Details of the supplier of the safety data sheet	
Supplier	TOTAL - Direction Afrique ZONE SUD 24, cours Michelet 92800 PUTEAUX FRANCE Tel : +33 (0)1 41 35 40 00 Fax : +33 (0)1 41 35 82 88
Please see section 16 to have the contact details of the local supplier.	TOTAL LUBRIFIANTS 562 Avenue du Parc de L'île 92029 Nanterre Cedex FRANCE Tel: +33 (0)1 41 35 40 00 Fax: +33 (0)1 41 35 84 71 For further information, please contact: Contact Point Technical/ HSEQ E-mail Address rm.msds-lubs@total.com
Emergency telephone	Africa +44 1235 239671 To speak to an interlocutor in Portuguese or Spanish: Emergency telephone: +44 1235 239670

SECTION 2: Hazards Identification

Classification of the substance or mixture	Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).
GHS Label elements, including precautionary statements	
Signal word	None
Hazard Statements	None
Other hazards which do not result in classification	
Physical-Chemical Properties	Contaminated surfaces will be extremely slippery.
Environmental properties	The product may form an oil film on the water surface that may stop the oxygen exchange.

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 3: Composition/Information on Ingredients

Mixture

Chemical nature	Mineral oil of petroleum origin.		
Chemical name	CAS-No	EC-No	Weight %
Amines, polyethylenepoly-, reaction products with 1,3-dioxolan-2-one and succinic anhydride monopolyisobutenyl derivs	147880-09-9	604-611-9	2.5-<5
Zinc alkyl dithiophosphate	68649-42-3	272-028-3	1-<2.5
Calcium long chain alkarylsulphonate	^	-	1-<2.5
Calcium long chain alkarylsulphonate	722503-69-7	-	0.25-<1
Calcium long chain alkaryl sulfonate	722503-68-6	-	0.1-<0.25
Additional information	Product containing mineral oil with less than 3% DMSO extract as measured by IP346		

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 4: First Aid Measures

Description of necessary first-aid measures

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse.
Inhalation	Remove casualty to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration.
Ingestion	Clean mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Protection of First-aiders	First aider needs to protect himself. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms/effects, acute and delayed

Skin contact	Not classified based on available data. May produce an allergic reaction.
Eye contact	Not classified based on available data.
Inhalation	Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	Treat symptomatically.
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ENGINE OIL 15W-40 DH-1 MSDS

SECTION 5: Fire-Fighting Measures

Suitable Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide (CO₂). ABC powder. Foam. Water spray or fog.

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Special Hazard

Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Combustion products include sulphur oxides (SO₂ and SO₃) and Hydrogen sulphide H₂S.
Phosphorous oxides. Nitrogen oxides (NO_x).
Mercaptans. Zinc oxides.

Advice for fire-fighters

Special protective equipment for fire-fighters. Wear self-contained breathing apparatus and protective suit.

Other information

Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

General Information

Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Environmental precautions

General Information

Do not allow material to contaminate ground water system. Prevent entry into waterways, sewers, basements or confined areas. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment

Dike to collect large liquid spills. If necessary dike the product with dry earth, sand or similar non-combustible materials.

Methods for cleaning up

Dispose of contents/container in accordance with local regulation. In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Other information

Personal Protective Equipment

See Section 8 for more detail.

Waste treatment

See section 13.

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 7: Handling and Storage

Precautions for safe handling

Advice on safe handling	For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.
Prevention of fire and explosion	Take precautionary measures against static discharges.
Hygiene measures	Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing is recommended. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep away from food, drink and animal feedingstuffs. Keep in a banded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Store at room temperature. Protect from moisture.
Materials to Avoid	Strong oxidizing agents.

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 8: Exposure Controls/Personal Protection

Control parameters

Exposure limits Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined).

Appropriate engineering controls

Engineering Measures Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment (PPE)

Personal Protective Equipment

General Information Protective engineering solutions should be implemented and in use before personal protective equipment is considered. The personal protective equipment (PPE) recommendations apply to the product ITSELF. In case of mixtures or formulations, it is suggested that you contact the relevant PPE suppliers.

Respiratory protection None under normal use conditions. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Type A/P1. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.

Eye Protection If splashes are likely to occur, wear: Safety glasses with side-shields.

Skin and body protection Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing.

Hand Protection Hydrocarbon-proof gloves. Fluorinated rubber. Nitrile rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 9: Physical and Chemical Properties

General Information

Appearance	Limpid
Colour	Brown
Physical State @20°C	Liquid
Odour	Characteristic
Odour Threshold	No information available.

Important health safety and environmental information

Property	Values	Remarks	Method
pH		Not applicable.	
Melting point/range		Not applicable.	
Boiling point/boiling range		No information available.	
Flash point	232 °C 450 °F		ASTM D 92 ASTM D 92
Evaporation rate		No information available.	
Flammability Limits in Air		No information available.	
upper Lower		No information available.	
Vapor Pressure		No information available.	
Vapor density		No information available.	
Relative density	0.883	@ 15 °C	ASTM D 4052
Density	883.1 kg/m ³	@ 15 °C	ASTM D 4052
Solubility in other solvents		No information available.	
logPow		No information available.	
Autoignition temperature		No information available.	
Decomposition temperature	100.9 mm ² /s	No information available.	ASTM D 445
Viscosity, kinematic		@ 40 °C	
Explosive properties	Not explosive.		
Oxidizing Properties	Not applicable.		
Possibility of hazardous reactions	No information available.		
Other information			
Freezing Point		No information available.	

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 10: Stability and Reactivity

Reactivity	None under normal processing.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.
Materials to Avoid	Strong oxidizing agents.
Hazardous Decomposition Products	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Combustion products include sulphur oxides (SO ₂ and SO ₃) and Hydrogen sulphide H ₂ S. Nitrogen oxides (NO _x). Phosphorous oxides. Mercaptans. Zinc oxides.

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 11: Toxicological Information

Information on likely routes of exposure

Inhalation	Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Skin contact	Not classified based on available data. May produce an allergic reaction.
Eye contact	Not classified based on available data.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	No information available.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity - Product Information

Oral	Not classified based on available data. 4.773 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
Dermal	Not classified based on available data. 4.773 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
Inhalation	Not classified based on available data. 38.005 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity.

Acute toxicity - Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc alkyl dithiophosphate	LD50 2230 mg/kg (Rat)	LD50 > 2000 mg/kg (Rat)	
Skin corrosion/irritation	Not classified based on available data.		
Serious eye damage/eye irritation	Not classified based on available data. The supplier of one or more of the components contained within this formulation has indicated that he has data on the components and/or similar mixtures, which confirms that at the concentration used, classification is not required.		
Sensitisation	Not classified based on available data. Contains sensitiser(s). May produce an allergic reaction.		

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 11: Toxicological Information (Continued)

Carcinogenicity	Not classified based on available data. During use in engines, contamination of oil with low levels of combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water.
Germ Cell Mutagenicity	Not classified based on available data.
Reproductive toxicity	Not classified based on available data.
Target Organ Effects (STOT)	None known.
STOT - single exposure	Not classified based on available data.
STOT - repeated exposure	Not classified based on available data.
Aspiration hazard	Not classified based on available data.
Other adverse effects	Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 12: Ecological Information

Ecotoxicity Not classified based on available data.

Acute aquatic toxicity - Product Information No information available.

Acute aquatic toxicity - Component Information

Chemical name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Zinc alkyl dithiophosphate 68649-42-3	EC50 (72h) 2 mg/l (Algae)	EC50 (48h) 5.4 mg/l (Daphnia magna)	LC50 (96h) 4.5 mg/l (Fish)	

Chronic aquatic toxicity - Product Information No information available.

Chronic aquatic toxicity - Component Information

Chemical name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Zinc alkyl dithiophosphate 68649-42-3			NOEC (28d) 1.8 mg/l (Fish)	

Effects on terrestrial organisms No information available.

Persistence and degradability No information available.

Bioaccumulative potential

Product Information No information available.

logPow No information available.

Component Information

Chemical name	log Pow
Zinc alkyl dithiophosphate - 68649-42-3	0.56

Mobility

Soil Given its physical and chemical characteristics, the product generally shows low soil mobility.

Air Loss by evaporation is limited.

Water The product is insoluble and floats on water.

Other adverse effects

General Information No information available.

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 13: Disposal Considerations

Waste from Residues / Unused Products

Should not be released into the environment. Do not empty into drains. Dispose of in accordance with all applicable national environmental laws and regulations. Where possible recycling is preferred to disposal or incineration.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other information

Refer to section 8 for safety and protective measures for disposal personnel.

SECTION 14: Transport Information

ADR/RID

Not regulated.

IMDG/IMO

Not regulated.

ICAO/IATA

Not regulated.

ADN

Not regulated.

SECTION 15: Regulatory Information

Further information

No information available.

National regulatory information

No information available.

ENGINE OIL 15W-40 DH-1 MSDS

SECTION 16: Other Information

Issuing date:	2018-01-18
Revision Date:	2018-01-18
Revision Note	No information available.

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists bw = body weight

bw/day = body weight/day

EC x = Effect Concentration associated with x% response GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals LL = Lethal Loading

NIOSH = National Institute of Occupational Safety and Health NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material Legend Section 8

TWA: Time Weight Average STEL: Short Time Exposure Limit PEL: Permissible exposure limit

REL: Recommended exposure limit TLV: Threshold Limit Values

Additional details on the supplier of the product

KENYA Supplier TOTAL KENYA LIMITED
Regal Plaza, 6th Avenue Limuru Road
P.O. Box 30736, 00100 GPO Nairobi / KENYA

SOUTH AFRICA Supplier TOTAL SOUTH AFRICA
(PTY) LTD
Total House, 3 Biermann Avenue, Rosebank, 2196
P.O Box 579, Saxonwold 2132 / SOUTH AFRICA

TANZANIA Supplier TOTAL TANZANIA LTD
TOTAL HOUSE - Msasani Peninsula
Haile Selassie Road, Plot no. 1720 P.O. BOX 1503 Dar es Salaam / TANZANIA

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.