

Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200)

Section 1: Identification

Product Name: Opti-2 Two Cycle Oil
Intended Use: 2 Cycle Engines
Uses Advised Against: All others
Emergency Health and Safety Number: Chemtrec: 800-424-9300 (24 Hours)
Customer Service: 1-800-332-5851
SDS Information:

Section 2: Hazard(s) Identification

Classified Hazards

H315 – Skin corrosion/irritation – Category
H336 – Specific target organ toxicity (single exposure) – Category
H411 – Hazardous to the aquatic environment, chronic toxicity – Category

Other Hazards

None known

LABELS



WARNING

Causes skin irritation. May cause drowsiness or dizziness. Repeated exposure may cause skin dryness or cracking. Toxic to aquatic life with long lasting effects.

Avoid breathing dust/gas/mist/vapors/spray. Wash thoroughly after handling. Use only outdoors or in well ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs get medical advice/attention. If inhaled remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a **POISON CENTER** or doctor/physician if you feel unwell. Take off contaminated clothing and wash before reuse. Collect spillage. Avoid release to the environment. Store in well ventilated place. Keep container tightly closed. Dispose of contents/container to approved disposal facility.

Section 3: Composition/Information on Ingredients

Component	CASRN	Concentration
Lubricant Base Oil (Petroleum)	Various	> 50
Petroleum Distillate, Light	64742-47-8	< 13
Additives	Proprietary	> 37

All concentrations shown are by weight.

Section 4: First Aid Measures

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: Remove contaminated shoes and clothing and cleanse affected area thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops and persists, seek medical attention.

Inhalation: First aid is not normally required. If breathing difficulties develop move victim away from source of exposure and into fresh air in a comfortable seating position. Seek immediate medical attention.

Ingestion: First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Most important symptoms and effects:

Acute: Minor respiratory irritation at high vapor concentrations.

Delayed: Dry skin and possible irritation with repeated exposure.

Notes to Physician: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Section 5: Fire-Fighting Measures

NFPA 704 Hazard Class

Health: 0 Flammability: 1 Instability: 0

0(Minimal) 1(Slight) 2(Moderate) 3(Serious) 4(Severe)

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Fire Fighting Instructions: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide and other products of incomplete combustion. Oxides of sulfur, nitrogen and phosphorus may also be formed.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

Section 6: Accidental Release Measures

Personal Precautions: This material may burn but will not ignite readily. Keep all sources of ignition from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify person down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone # 800-424-8802). If spill/release in excess of EPA reportable quantity (see Section 15) is made into the environment immediately call the National Response Center (phone # 800-424-8802).

Methods for Containment and Clean-Up: Notify relevant authorities in accordance with all applicable regulations. Immediate clean-up of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations. Recommended measures are based on the most likely spillage scenarios for this material, however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

Section 7: Handling and Storage

Precautions for safe handling: Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate protective equipment (see Section 8). Used motor oils have been shown to cause skin cancer in mice after repeated application to the skin without washing. Brief or intermittent skin contact with used motor oil is not expected to cause harm if the oil is thoroughly removed by washing with soap and water.

Spills will produce extremely slippery surfaces. Do not enter confined spaces, such as tanks or pits, without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

Conditions for safe storage: Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry and well ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

'Empty' containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks or other sources of ignition. They may explode and cause injury or death. 'Empty' drums should be completely drained, properly bunged and promptly shipped to the supplier or a drum re-conditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain, or have contained, this material refer to OSHA regulations, ANSI Z49.1 and other references pertaining to cleaning, repairing, welding or other contemplated operations.

Section 8: Exposure Controls/Personal Protection

Chemical Name	ACGIH	OSHA	Other
Lubricant base oil (Petroleum)	TWA: 5mg/m ³ STEL: 10mg/m ³	TWA: 5mg/m ³ as Oil Mist, if generated	-----
Hydrotreated Distillate, Light ..C9-16	TWA: 200mg/m ³ Skin based on Kerosene 8008-20-6	-----	Based on Stoddard Solvent

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or other local agencies, for further information.

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Eye/Face Protection: The use of eye protection that meets or exceeds ANSI Z87.1 is recommended to protect against potential eye contact, irritation or injury. Depending on conditions of use a face shield may be necessary.

Skin/Hand Protection: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Depending on exposure and use conditions additional protection may be necessary to prevent skin contact. Suggested protective materials: Nitrile

Respiratory Protection: Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19% oxygen) situations or under conditions that are immediately dangerous to life and health (IDLH).

Other Protective Equipment: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

Section 9: Physical and Chemical Properties

Data represent typical values and are not intended to be specifications. N/A = Not Applicable N/D = Not Determined

Appearance: Blue	Flash Point: > 230 °F / > 110 °C
Physical Form: Liquid	Test Method: Pensky-Martens Closed Cup ASTM D93
Odor: Petroleum	Initial Boiling Point: No data
Odor threshold: No data	Vapor pressure: <1mm Hg
pH: N/A	Partition Coefficient (n-octanol/water) (K_{ow}): No data
Vapor Density (air=1): >1	Melting /Freezing Point: N/A
Upper Explosive Limits: No data	Auto-ignition Temperature: No data
Lower Explosive Limits: No data	Decomposition Temperature: No data
Evaporation Rate: No data	Specific Gravity: 0.86
Particle Size: N/A	Bulk Density: 7.2 lbs/gal
Percent Volatile: Negligible	Viscosity: 13.4 cSt @ 100°C; 101 cSt @ 40°C
Flammability (solid,gas): N/A	Pour Point; <-22 °F / < -30 °C
Solubility in Water:	

Section 10: Stability and Reactivity

Reactivity: Not chemically reactive

Chemical stability: Stable under normal ambient conditions of use

Possibility of hazardous reactions: Hazardous reactions not anticipated.

Conditions to avoid: Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

Incompatible materials: Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous decomposition products: Not anticipated under normal conditions of use. During use in engines, contamination of oil with low levels of hazardous fuel combustion by-products (e.g. aromatic hydrocarbons) may occur.

Hazardous Polymerization: Not known to occur.

Section 11: Toxicological Information

Information on Toxicological Effect of Substance/Mixture

<u>Acute Toxicity</u>	<u>Hazard</u>	<u>Additional Information</u>	<u>LC50/LD50 Data</u>
Inhalation	Unlikely to be harmful		>5mg/L (mist, est.)
Skin Absorption	Unlikely to be harmful		>2g/kg (estimated)
Ingestion (Swallowing)	Unlikely to be harmful		>5g/kg (estimated)
Aspiration Hazard:	Not expected to be an aspiration hazard.		

Skin Corrosion/Irritation: Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Serious Eye Damage/Irritation: Causes mild eye irritation.

Symptoms of Overexposure: While significant vapor concentrations are not likely, high concentrations can cause minor respiratory irritation, headache, drowsiness, loss of coordination, disorientation and fatigue. Ingestion can cause irritation of the digestive tract, nausea, diarrhea and vomiting. Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea.

Skin Sensitization: No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

Respiratory Sensitization: No information available.

Specific Target Organ Toxicity (Single Exposure). May cause drowsiness and dizziness. Based on component information.

Specific Target Organ Toxicity (Repeated Exposure): No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

Carcinogenicity: No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

Germ Cell Mutagenicity: No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

Reproductive Toxicity: No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

Information on Toxicological Effects of Components

Lubricant Base Oil (Petroleum)

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including severe hydrocracking/hydroprocessing to reduce aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3% PAH's and are not considered carcinogens by NTP, IARC or OSHA.

Petroleum distillates, hydrotreated light

Carcinogenicity: Petroleum middle distillates have been shown to cause skin tumors in mice following repeated prolonged skin contact. Follow-up studies have shown that these tumors are produced through a non-genotoxic mechanism associated with frequent cell damage and repair, and that they are not likely to cause tumors in the absence of prolonged skin irritation.

Section 12: Ecological Information

GHS Classification:

H411 - Hazardous to the aquatic environment, chronic toxicity – Category 2

Toxic to aquatic life with long lasting effects



Toxicity: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Persistence and Degradability: The hydrocarbons in this material are not readily biodegradable but are regarded as inherently biodegradable since their hydrocarbon components can be degraded by microorganisms.

Bio-accumulative Potential: Log Kow values measured for the hydrocarbon components of this material are greater than 5.3 and therefore regarded as having the potential to bio-accumulate. In practice metabolic processes may reduce bio-concentration.

Mobility in Soil: Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

Other Adverse Effects: None anticipated.

Section 13: Disposal Considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be regulated RCRA “listed” hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Section 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the

material contains constituents which are not required to be listed in the SDS but could affect hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, recycle used oil in accordance with applicable federal, state and local regulations. Container contents should be completely used and containers be emptied prior to discard.

Section 14: Transport Information

U.S. Department of Transportation (DOT)

Shipping Description: *Non-bulk shipments by land are not regulated.
Not regulated*

Note: *If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply.
(Contains oil)*

International Maritime Dangerous Goods (IMDG)

Shipping Description: UN3082, Environmentally hazardous substance, liquid, n.o.s. (Petroleum distillates), 9, III

Non-Bulk Package Marking: UN3082, Environmentally hazardous substance, liquid, n.o.s. Class 9

Labels: Class 9 / 3082

Placards/Marking (Bulk): Class 9 / 3082

Packaging – Non-Bulk: P001, LP01

EMS: F-A, S-F

Note: *U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.*

Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

International Civil Aviation Org. / International Air Transport Assoc. (ICA/IOTA)

UN/ID #: UN3802

Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Petroleum Distillates)

Hazard Class /Division: 9

Packing Group: III

Non-Bulk Package Marking: Environmentally hazardous substance, liquid, n.o.s. (Petroleum Distillates), UN3082, (Environmentally Hazardous Substance Mark) (if >5L container)

Labels: Class 9

ERG Code: 9L

Note: *Environmentally Hazardous Substance Mark not required if container is <5L or 5kg*

U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.

	LTD.QTY	Passenger Aircraft	Cargo Aircraft Only
Packaging Instruction #.	Y964	964	964
Max.Net Qty. Per Package:	30 kg.	450 L	450 L

Section 15: Regulatory Information

CERCLA/SARA – Section 302 Extremely Hazardous Substances and TPQs (in pounds):

This material does not contain any chemicals subject to the requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA – Section 311/312 (Title Hazard Categories)

Acute Health:	No
Chronic Health:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactive Hazard:	No

CERCLA/SARA – Section 313 and 40 CFR 372

This material does not contain any chemicals subject to these reporting requirements.

EPA 9CERCLA) Reportable Quantity (pounds):

This material does not contain any chemicals with CERCLA Reportable Quantities.

California Proposition 65:

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

International Hazard Classification:

GHS Classification:

H316 – Skin corrosion/irritation – Category 3

Canada:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the Regulations.

WHMIS Hazard Class:

None

National Chemical Inventories

All components are either listed on the US TSCA Inventory or are not regulated under TSCA.

All components are either on the DSL or are exempt from DSL listing requirements.

US Export Control Classification Number: EAR99

Section 16: Other Information

Guide to Abbreviations:

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 Minutes); CERCLA = The Comprehensive Environmental Response, Compensation and Liability Act; EPA = Environmental Protection Agency; GHS = General Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Exposure Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term exposure Limit (15 minutes); TLV = Threshold Limit Value (AVHIV); TWA = Time Weighted Average (8 hours); UEL = Upper Exposure Limit; WHMIS = Worker Materials Information System (Canada).

Disclaimer of Expressed and Implied Warranties:

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Date of Issue: 29th March 2014

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Status:

FINAL