

SAFETY DATA SHEET – MERCURY OPTIMAX 2-CYCLE ENGINE OIL

1. IDENTIFICATION

1.1. PRODUCT IDENTIFIER USED ON LABEL:

1.1.1. MERCURY OPTIMAX 2-CYCLE ENGINE OIL

1.2. OTHER MEANS OF IDENTIFICATION: 139-1893K

1.2.1. DFI 2-CYCLE OUTBOARD OIL

1.2.2. 92-858037K01; 92-858038K01; 92-858037KC1; 92-858038KC1; 92-8M0075302

1.3. RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE;

1.3.1. PETROLEUM LUBRICATING OIL

1.3.2. NO OTHER USES RECOMMENDED

1.4. NAME, ADDRESS, AND TELEPHONE NUMBER OF THE CHEMICAL MANUFACTURER, IMPORTER, OR OTHER RESPONSIBLE PARTY:

1.4.1.

Mercury Marine

P.O. Box 1939

Fond du Lac, WI 54935

United States of America

Product Information

General Information: +1 (920) 929-5000

1.5. EMERGENCY PHONE NUMBER:

1.5.1.

Emergency Response

North America: CHEMTREC (800) 424-9300 after 5:00pm CST (International) +17035273887

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2. HAZARD(S) IDENTIFICATION

2.1. CLASSIFICATION OF THE CHEMICAL IN ACCORDANCE WITH PARAGRAPH (d) of §1910.1200:

- 2.1.1. Acute Toxicity: Inhalation Category 4
- 2.1.2. Skin Irritant: Category 2
- 2.1.3. Eye Irritant: Category 2B
- 2.1.4. Skin sensitizer: Category 1B
- 2.1.5. Aquatic: Chronic Category 3
- 2.1.6. Flammable Liquid: Category 4

2.2. Signal Word:

- 2.2.1. Warning

2.3. Symbol:



2.4. Hazard Statements:

- 2.4.1. Harmful if Inhaled
- 2.4.2. Causes Skin irritation
- 2.4.3. Causes Eye irritation
- 2.4.4. May cause an allergic skin reaction.
- 2.4.5. May cause lung damage if swallowed.
- 2.4.6. Combustible liquid

2.5. Precautionary Statements:

2.5.1. Prevention:

- 2.5.1.1. Avoid breathing dust/fume/gas/mist/vapors/spray.
- 2.5.1.2. Use only outdoors or in a well-ventilated area.
- 2.5.1.3. Wash thoroughly after handling.
- 2.5.1.4. Wear protective gloves.

2.5.2. Response:

- 2.5.2.1. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
- 2.5.2.2. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
- 2.5.2.3. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- 2.5.2.4. If ingested: Do not induce vomiting. Call a physician.

3. Composition/ information on ingredients

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3.1. The chemical name and concentration (exact percentage) or concentration ranges of all ingredients which are classified as health hazards in accordance with paragraph (d) of §1910.1200

3.1.1.

COMPONENTS	CAS Number	EU Number	Concentration (%)	Phrases
Distillates (petroleum), hydrotreated heavy paraffinicBase oil	64742-54-7	265-157-1	40-60	
Distillates (petroleum), hydrotreated light	64742-47-8	265-149-8	20-30	R65
Long chain alkyl polyamide	Not – available	Not – available	5-15	Xi/R36/38, Xi/R43, R52/53
The full text of all R-phrases is shown in Section 16				

4. FIRST AID MEASURES

4.1.

If on Skin:	Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
If in Eyes:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If inhaled	Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
If ingested	Do not induce vomiting. Call a physician.

5. FIRE FIGHTING MEASURES

5.1. **Flash Point:** 162°F (72°C)

5.2. **Protective Equipment/Fire Fighting Instructions:**

5.2.1. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

5.3. **Extinguishing Media:**

5.3.1. Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.

5.4. **Special Firefighting Procedures:**

5.4.1. Cool exposed containers with water spray.

5.5. **Unusual Fire and Explosion Hazards:**

5.5.1. Pressure increases in over heated closed containers. Cool containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

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6.1. Spill Procedures:

6.1.1. Remove ignition sources. Recover Liquid. Add absorbent to spill area. Ventilate confined spaces. Advise authorities if product enters sewers, etc.

6.2. Waste Disposal:

6.2.1. Assure conformity with applicable disposal regulations. Dispose of absorbed material at approved waste site

6.3. Precautionary Measures:

6.3.1. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Wash thoroughly after handling.

6.3.2. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

7. HANDLING AND STORAGE

7.1. HANDLING

7.1.1. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum re-conditioner or disposed of properly.

7.2. STORAGE

7.2.1. Keep container closed when not in use. Do not store with strong oxidizing agents. Do not store at elevated temperatures.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. Component Exposure Limits:

8.1.1. Petroleum distillates, hydrotreated heavy naphthenic

8.1.1.1. ACGIH TLV: 5mg/m³ (oil mist) TWA

8.1.1.2. OSHA PEL: 5mg/m³ (oil mist) TWA

8.1.2. Petroleum distillates, hydrotreated light

8.1.2.1. ACGIH TLV: 5mg/m³ (oil mist) TWA

8.1.2.2. OSHA PEL: 5mg/m³ (oil mist) TWA

8.1.3. Long chain alkyl polyamide

8.1.3.1. Not-available

8.2. Engineering Controls:

8.2.1. Ventilate as needed to comply with exposure limit

8.3. Eye Protection:

8.3.1. Use goggles/face shield to avoid eye contact

8.4. Glove Protection:

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8.4.1. Use impervious gloves to avoid repeated/prolonged skin contact.

8.5. Work/Hygienic Practices:

8.5.1. If clothing becomes contaminated, change to fresh clean clothing. Do not wear until thoroughly laundered.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Appearance/Odor:	Dark amber colored liquid with mild hydrocarbon odor.	9.2. Odor Threshold:	No data available
9.3. pH:	No data available	9.4. Boiling Point:	Wide range
9.5. Melting Point:	No data available	9.6. Solubility (H₂O):	Negligible
9.7. Specific Gravity:	0.8633 @ 15.6°C	9.8. Density:	7.188 lbs/gal
9.9. Octanol/H₂O Coeff.:	No data available	9.10. Evaporation Rate (BUAC=1):	<1
9.11. Molecular Weight:	No data available	9.12. Decomposition Temp:	No data available
9.13. Auto Ignition:	No data available	9.14. Lower Flammability Limit:	No data available
9.15. Flash Point:	162°F (72°C)	9.16. Upper Flammability Limit:	No data available
9.17. Vapor Density (Air=1):	>1	9.18. Vapor Pressure:	<1mmHg @ 20°C
9.19. VOC:	235g/L	9.20. Flammability Class:	Category 4
9.21. Viscosity @ 40°C	35cSt (35 mm ² /s)	9.22. Viscosity @ 100°C	6.5cSt (6.5 mm ² /s)

10. STABILITY AND REACTIVITY

10.1. Reactivity:

10.1.1. Material does not pose a significant reactivity hazard.

10.2. Chemical Stability:

10.2.1. Stable

10.3. Incompatibility/Conditions to avoid:

10.3.1. Avoid strong oxidants

10.4. Possibility of Hazardous Reactions:

10.4.1. Will not undergo hazardous polymerization.

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10.5. Hazardous Decomposition Products:

10.5.1. Partial burning produces fumes, smoke and carbon monoxide

11. TOXICOLOGY INFORMATION

11.1. Likely Routes of Exposure:

11.1.1. Ingestion, Inhalation, Eye contact, Skin contact.

11.2. Acute Effects:

11.2.1. Inhalation: Harmful if inhaled. May cause respiratory irritation.

11.2.2. Eye Contact: Causes eye irritation.

11.2.3. Skin Contact: Causes skin irritation.

11.2.4. Ingestion: May cause lung damage if swallowed.

11.3. Component Data/ Analysis

11.3.1. Petroleum distillates, hydrotreated heavy naphthenic (64742-54-7):

11.3.1.1. Oral (LD50) (Rat): Acute: >5000 mg/kg

11.3.1.2. Inhalation (LC50) (Rat): Acute: 2.18 mg/l (4hr)

11.3.1.3. Dermal (LD50) (Rabbit): >2000 mg/kg

11.3.2. Petroleum distillates, hydrotreated light (64742-47-8):

11.3.2.1. Oral (LD50) (Rat): Acute: >15000 mg/kg

11.3.2.2. Inhalation (LC50) (Rat): Acute: 5.2mg/l, 4hrs

11.3.2.3. Dermal (LD50) (Rabbit): >2000 mg/kg

11.3.3. Long chain alkyl polyamide

11.3.3.1. No information available

11.4. Sensitization:

11.4.1. May cause an allergic skin reaction.

11.5. Carcinogenicity:

11.5.1. None known

11.6. Mutagenicity:

11.6.1. Not expected to be mutagenicity.

11.7. Reproductive Toxicity:

11.7.1. None known

11.8. Teratogenicity:

11.8.1. None Known

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity

12.1.1. An environmental fate analysis is not available for this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

12.2. Environmental Fate

12.2.1. Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating

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action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

12.3. Mixture Data analysis based on Component data:

- 12.3.1.1. 48 hour(s) EC50: 4475 mg/l (WAF) (Daphnia magna)
- 12.3.1.2. 72 hour(s) EC50 (growth rate): 146 mg/l (WAF) (Selenastrum capricornutum)
- 12.3.1.3. 72 hour(s) EC50 (cell density): 96 mg/l (WAF) (Selenastrum capricornutum)
- 12.3.1.4. 96 hour(s) LC50: >4566 mg/l (WAF) (Oncorhynchus mykiss)

13. DISPOSAL CONSIDERATIONS

13.1. Waste Disposal:

- 13.1.1. Assure conformity with applicable disposal regulations. Dispose of absorbed material at approved waste site.

14. TRANSPORTATION INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

14.1. ROAD AND RAIL

- 14.1.1. DOT: NOT REGULATED

14.2. VESSEL

- 14.2.1. IMDG: NOT REGULATED

14.3. AIR

- 14.3.1. IATA: NOT REGULATED

15. REGULATORY INFORMATION

15.1. TSCA Inventory

- 15.1.1. This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

15.2. SARA 302/304 Emergency Planning and Notification

- 15.2.1. No components were identified.

15.3. SARA 311/312 Hazard Identification

- 15.3.1. Acute (Immediate) Health Hazard
- 15.3.2. Combustible liquid

15.4. SARA 313 Toxic Chemical Notification and Release Reporting

- 15.4.1. : No components were identified.

15.5. CERCLA

- 15.5.1. No components were identified.

15.6. Clean Water Act (CWA)

- 15.6.1. This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

15.7. California Proposition 65:

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15.7.1. The product contains chemicals known to the state of California to cause cancer, birth defects, or any other reproductive harm.

15.8. New Jersey Right-to-Know Label

15.8.1. Petroleum Oil

16. OTHER INFORMATION

16.1.

HAZARD RANKINGS			
HMIS		NFPA	
HEALTH HAZARD	1	HEALTH HAZARD	1
FIRE HAZARD	2	FIRE HAZARD	2
PHYSICAL HAZARD	0	INSTABILITY/REACTIVITY	0
Personal Protection	B		

16.2. List of R-Phrases

R36/38,	Irritating to eyes and skin.
R43	May cause sensitization by skin contact.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

16.3. **Date of preparation:** 12/05/2013

16.4. This product may be formulated with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, Mercury Marine must rely on information provided by those materials manufacturers or distributors.

16.5. **MANUFACTURER DISCLAIMER:**

16.5.1. *The data presented herein is based upon tests and information, which we believe to be reliable. However, users should make their own investigations to determine the suitability of the information for their particular purpose*