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MATERIAL SAFETY DATA SHEETS

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

GENERIC NAME: Outboard Motor Oil

ISSUE DATE: March 2006

THIS GENERIC MSDS REPRESENTS THE FOLLOWING ENGINE ARMOUR PRODUCTS:

TRADE NAMES:

1. Outboard TC-W3 RL

CAS NUMBER:	Mixture
SYNONYMS / GENERAL NAMES:	Lubricating Oil
24 HOUR EMERGENCY TELEPHONE:	(CHEMTREC) 1-800-424-9300
TECHNICAL INFORMATION:	813-248-1988

2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS #	%	HAZARD DATA
Refined Petroleum Oil(s)	64741-88-4 64742-01-4	65-80	Oral LD ₅₀ (rat): >15 g/kg Eye: Practically Non-Irritating Skin: Practically Non-Irritating IhIn LC ₅₀ /4H(rat): >5,000 mg/m ³
HPO 30	Mixture	<15	Eye: Mild Irritant Skin: Mild Irritant
Ashless Dispersant and Anti-Oxidant	Mixture	<12	Eye: Mild Irritant Skin: Mild Irritant
Dye	Mixture	<0.1	Oral LD ₅₀ (rat): 12.6 g/kg Skin LD ₅₀ (rabbit): 10.2 g/kg

HAZARDOUS INGREDIENTS: None

3. HAZARDOUS IDENTIFICATION

ROUTES OF ENTRY: Inhalation of incidental mists or vapors, slight dermal absorbability.

TARGET ORGANS: None

REPRODUCTIVE EFFECTS: NA

SEE SECTION 12 FOR COMPLETE HAZARD INFORMATION

4. FIRST AID MEASURES

EYES:	Flush with large volumes of water. Seek physician if any complications arise.
DERMAL:	Wash with soap and water. Do not wear heavily contaminated clothing before laundering.
INGESTION:	Do not induce vomiting.
INHALATION:	Remove to fresh air. Respiratory support, if necessary. Seek medical aid.
INJECTION:	Subcutaneous injection is a medical emergency. Seek medical aid immediately.

5. FIRE FIGHTING MEASURES

FLASH POINT, °C (°F): 148°C (298°F)

FLAMMABLE LIMITS (% BY VOLUME IN AIR): LOWER: NA UPPER: NA

EXTINGUISHING MEDIA: CO₂, dry chemical, foam, water fog

SPECIAL FIRE FIGHTING PROCEDURES: None

NFPA RATING: HEALTH: 0 FLAMMABILITY: 1 REACTIVITY: 0

NA - NOT APPLICABLE

ND - NO DATA

NE - NOT ESTABLISHED

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES:	Remove sources of heat or ignition, provide adequate ventilation, contain leak. Report spills as required to appropriate authorities.
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7. HANDLING AND STORAGE

STORAGE PROCEDURES:	Store in a cool, dry, well ventilated area. Do not apply heat or flame to container. Keep separate from strong oxidizing agents.
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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:	Use in well ventilated area. In confined space, mechanical ventilation may be required to keep levels of certain components below mandated standards, as evaluated by designated personnel.
DERMAL:	Oil impervious gloves if frequent or prolonged contact is expected.
EYE:	Safety goggles, or chemical splash goggles if splashing is anticipated.
RESPIRATORY:	Normally none required. If high vapor or mist concentrations expected, use respirator approved for organic vapors or mists.
OTHER CLOTHING:	Wear body-covering work clothes to avoid prolonged or repeated exposure. Launder spoiled work clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Blue Liquid
ODOR:	Slight odor of petroleum distillate
pH:	ND
VAPOR PRESSURE):	<20
VAPOR DENSITY:	>1
MELTING POINT:	NA
BOILING POINT°C:	>149 (>300)
SOLUBILITY IN WATER:	Negligible
GRAVITY:	28.0
EVAPORATION RATE:	<1
VISCOSITY @ 100°C:	7.859
PERCENT VOLATILE:	15-25

10. STABILITY AND REACTIVITY

STABILITY:	Stable
INCOMPATIBILITY:	Strong Oxidants
POLYMERIZATION:	None
HAZARDOUS DECOMPOSITION PRODUCTS:	CO ₂ (CO under incomplete combustion)

11. TOXICOLOGICAL INFORMATION**-- ACUTE EXPOSURE --**

INGESTION:	On ingestion of large quantities, slight GI discomfort, diarrhea, and headache may occur. Small doses may produce irritation and diarrhea.
EYE:	Mildly irritating
INJECTION:	Subcutaneous or intramuscular injection should be considered as a medical emergency.
DERMAL:	Mild irritant
INHALATION:	Low risk of inhalation. In enclosed spaces or when hot, vapors may reach concentrations sufficient to cause drowsiness, dizziness, headache, nausea, or lung irritation. Mists above TLV may cause chemical pneumonitis.

CHRONIC EXPOSURE SYMPTOMS:	Prolonged and/or frequent dermal contact may cause drying, cracking (dermatitis) or folliculitis. Repeated, excessive exposure to mists or fumes may induce pulmonary irritation or chronic bronchitis.
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NA - NOT APPLICABLE

ND - NO DATA

NE - NOT ESTABLISHED

12. HEALTH INFORMATION

No	Carcinogen	No	Corrosive
No	Animal Carcinogen	No	Irritant
No	Suspect Carcinogen	No	Sensitizer
No	Mutagen	No	Teratogen
No	Highly Toxic	No	Target Organ
No	Toxic		

HMIS CODE: HEALTH: 0 FIRE: 1 REACTIVITY: 0
 PRECAUTIONARY LABELS: None

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal. Check before disposing to be sure you are in compliance with all applicable laws and regulations. RCRA Emergency Hotline Number: 800-424-9346

14. TRANSPORT INFORMATION**DOT (DEPARTMENT OF TRANSPORTATION)**

PROPER SHIPPING NAME:	Petroleum Lubricating Oil
HAZARD CLASS:	Non-Hazardous
HAZARD IDENTIFICATION NUMBER:	None assigned
DOT PLACARD:	None
COMPATIBILITY CATEGORY:	ND

15. REGULATORY INFORMATION**SARA SECTION 313 - TOXIC CHEMICALS:**

This product does not contain toxic chemicals under SARA Section 313 and 40 CFR Part 372.

SARA SECTION 311 - HAZARD CATEGORIES:

This product may meet one or more of the criteria for the hazard categories defined in 40 CFR Part 370 as established by Sections 311 and 312 of SARA as indicated below:

No	IMMEDIATE (ACUTE) HEALTH HAZARD	No	SUDDEN RELEASE OF PRESSURE HAZARD
No	DELAYED (CHRONIC) HEALTH HAZARD	No	REACTIVE HAZARD
No	FIRE HAZARD		

SARA SECTION 302 - EXTREMELY HAZARDOUS WASTE:

This product is not known to contain any components in concentrations greater than one percent that are listed as Extremely Hazardous Substances in 40 CFR Part 355 pursuant to the requirements of Section 302(a) of SARA.

CLEAN WATER ACT (CWA):

Under the CWA, discharges of crude oil and petroleum products to surface water without proper Federal and State permits must be reported immediately to the National Response Center at (800) 424-8802.

CERCLA HAZARDOUS SUBSTANCES:

As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance.

U.S. TSCA INVENTORY

All components of this material are on the U.S. TSCA Inventory or are not required to be listed on the U.S. TSCA Inventory

16. OTHER INFORMATION

THE INFORMATION IN THIS MATERIAL SAFETY DATA SHEET SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ENGINE ARMOUR BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS.

NFPA HAZARD RATING	least - 0	slight - 1	moderate - 2	high - 3	extreme - 4
HMIS HEALTH RATING	least - 0	slight - 1	moderate - 2	high - 3	extreme - 4

NA - NOT APPLICABLE

ND - NO DATA

NE - NOT ESTABLISHED