



**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**MSDS NUMBER:** 5403

**MSDS DATE:** April 1, 2004

**PRODUCT NAME:** ULTRA TWO-CYCLE MOTOR OIL

**TRANSPORTATION EMERGENCIES:** CALL CANUTEC AT (613) 996-6666 (Canada)

**Ontario Regional Poison Information Center**  
 1-800-267-1373 (Ottawa)  
 1-800-268-9017 (Toronto)

**Quebec Poison Control Center**  
 1-800-463-5060

**New Brunswick Poison Information Center**  
 (506) 857-5555

**Nova Scotia / PEI Poison Control Center:**  
 1-800-565-8161

**Newfoundland Poison Control Center**  
 (709) 722-1110

**MSDS ASSISTANCE: 1-888-871-4404**

**SUPPLIER'S NAME/ADDRESS:**

ULTRAMAR LTD  
 2200 McGill College  
 Montreal, Quebec H3A 3L3  
 (514)499-6111

**CHEMICAL NAME:** Petroleum oil, heavy paraffinic, and  
 Hydrotreated Light Petroleum Distillate

**CAS NUMBER:** 64741-88-4  
 64742-47-8

**SYNONYMS/Common Names:** This Material Safety Data Sheet applies to the following product descriptions for Hazard Communication purposes only. Technical specifications vary greatly depending on the product and are not reflected in this document. Consult specification sheets for technical information.

ULTRA TWO-CYCLE MOTOR OIL

**2. COMPOSITION, INFORMATION ON INGREDIENTS**

**PRODUCT USE:** This product is intended for use as a fuel additive in two-cycle gasoline engines, at a ratio recommended by the manufacturer. Use in other applications may result in higher exposures and require additional controls, such as local exhaust ventilation and personal protective equipment.

**DESCRIPTION:** This product is a mixture of a single or multiple lubricating oil base stocks, hydrotreated light petroleum distillates, and includes performance additives such as dialkylamino-1,4 anthraquinone. Composition varies greatly and includes C9 and heavier hydrocarbons with a boiling range above 150°C. The following is a non-exhaustive list of common components, typical percentage ranges in product, and occupational exposure limits for each.

Component or Material Name	%	CAS Number	ACGIH Limits			OSHA Exposure Limits			
			TLV	STEL	Units	PEL	STEL	C/P	Units
Solvent naphtha, light aromatic	10-30	mixture	NA	NA	NA	NA	NA	NA	NA

Solvent naphtha, heavy aliphatic	10-30	64742-96-7	NA	NA	NA	NA	NA	NA	NA
Solvent naphtha, heavy aromatic	1-5	64742-94-5	NA	NA	NA	NA	NA	NA	NA
Polyisobutenyl succinic	1-5	NA	NA	NA	NA	NA	NA	NA	NA

Basis for LD <sub>50</sub> and LC <sub>50</sub> values	LD <sub>50</sub> value	Species & route	LC <sub>50</sub> Value	Species and route
Solvent naphtha, heavy aromatic	> 2 ml/kg	Rabbit by dermal	>590 mg/m <sup>3</sup> (4H)	Rat by inhalation
Solvent naphtha, heavy aromatic	> 8 ml/kg	Rat by oral		

### 3. HAZARDS IDENTIFICATION

#### HEALTH HAZARD DATA:

1. Heavy paraffin petroleum oils such as this product, are of low toxicity by inhalation, ingestion and dermal exposure routes. The most relevant exposure occurs through skin contact, which may result in dermatitis (irritation, cracking, dry skin) with prolonged or repeated contact, and poor hygiene. Wash with soap and water after contact. Prolonged contact with used motor oil has caused skin cancer in laboratory animals. Avoid contact with used motor oils and wash skin thoroughly with soap and water afterwards.
2. In applications where mists or vapors are generated, inhalation exposure may be significant and result in respiratory irritation, nausea, and headache. Control exposures through use of process enclosure, exhaust ventilation, and respiratory protection. Performance of industrial hygiene exposure monitoring is recommended where mists are generated, or heated product is used.
3. Accidental ingestion may result in irritation of the digestive tract, nausea, vomiting, upset stomach, diarrhea, gastric disturbances, and abdominal pain. Avoid eating and drinking in areas where product is in use. See MSDS Section 4 for emergency first aid responses.
4. The major effects of exposure to light petroleum distillates are headache, drowsiness, irritation of the eyes and nose, and lungs. Target organs include the respiratory system, nervous system, and mucous membranes.
5. A life-time skin painting study by the American Petroleum Institute has shown that similar naphtha products with a boiling range of 350-700° F usually produce skin tumors and/or skin cancers in laboratory mice. Only a weak to moderate response occurred. The effect to humans has not been determined. Contact dermatitis (skin irritation) may occur with prolonged or repeated contact.

**HAZARDS OF COMBUSTION PRODUCTS:** Carbon monoxide and carbon dioxide can be found in the combustion products of this product and other forms of hydrocarbon combustion. Carbon monoxide in moderate concentrations can cause symptoms of headache, nausea, vomiting, increased cardiac output, and confusion. Exposure to higher concentrations of carbon monoxide can cause loss of consciousness, heart damage, brain damage, and/or death. Exposure to high concentrations of carbon dioxide can cause simple asphyxiation by displacing available oxygen. Combustion of this and other similar materials should only be carried out in well ventilated areas. Combustion products may include toxic oxides of sulfur, zinc, and phosphorous in trace quantities due to presence of additives.

**MEDICAL CONDITION GENERALLY AGGRAVATED BY EXPOSURE:** Medical conditions which have the same symptoms and effects as those outlined under the health hazard information section can be aggravated by exposure to this product.

**MEDICAL LIMITATION:** N/A

**CARCINOGENICITY STATEMENT:** This product is manufactured from severely hydrotreated or solvent refined petroleum base oils, which are not classified as carcinogens by IARC, NTP or OSHA. IARC has listed kerosene as probably carcinogenic to humans based on sufficient evidence in experimental animals and limited evidence in humans.

#### MUTAGENICITY/TERATOGENICITY/ REPRODUCTIVE TOXICITY INFORMATION

**Mutagenicity:** Has no known effects

**Teratogenicity:** Has no known effects

**Reproductive Toxicity:** Has no known effects

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#### 4. FIRST AID MEASURES

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**EYES:** Immediately flush eyes with large amount of water for at least 15 minutes holding lids apart to ensure flushing of the entire eye surface. **SEEK MEDICAL ATTENTION.**

**SKIN:** Wash contaminated areas with plenty of soap and water. A soothing ointment may be applied to irritated skin after thoroughly cleansing. Remove contaminated clothing and footwear. **SEEK MEDICAL ATTENTION.**

**INHALATION:** Get person out of contaminated area to fresh air. If breathing has stopped resuscitate and administer oxygen if readily available. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

**INGESTION:** Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. If vomiting occurs spontaneously, keep airway clear. **SEEK MEDICAL ATTENTION IMMEDIATELY.**

**NOTES TO PHYSICIAN:** Do not induce vomiting, use gastric lavage only. Aspiration of liquid into the lungs could result in chemical pneumonitis. Use of adrenaline is not advised. Treat symptomatically.

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#### 5. FIRE AND EXPLOSION DATA

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**FLASH POINT:** > 65 °C (150 °F) - PM

**AUTOIGNITION TEMPERATURE:** NA

**FLAMMABLE LIMITS IN AIR:** UEL: NA  
LEL: NA

**EXTINGUISHING MEDIA:** Use dry chemical, carbon dioxide, foam or water spray. Water may cause frothing, but water should be used to keep fire-exposed containers cool

**SPECIAL FIRE FIGHTING PROCEDURES:** Pressure-demand, self contained, breathing apparatus should be provided for fire fighters in buildings or confined areas where product is stored.

**UNUSUAL FIRE AND EXPLOSION HAZARD:** NA

**SENSITIVITY TO IMPACT AND ACCUMULATION OF STATIC CHARGE:** N/A

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#### 6. ACCIDENTAL RELEASE MEASURES

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If material is spilled, steps should be taken to contain liquid and prevent discharges to streams or sewer systems. Spills or releases should be reported, if required to the appropriate local, state and federal regulatory agencies.

**SMALL SPILLS:** Remove ignition sources. Absorb spilled material with non-combustible materials such as cat litter, dirt, sand, or petroleum sorbent pads/pillows. Do not use combustible materials like rags, wood chips, or saw dust. Remove contaminated materials to an appropriate disposal container.

**LARGE SPILLS:** Remove ignition sources. Dike spill area with sand or dirt to contain material and cover sewers/drains. Remove liquid using grounded suction pumps to suitable storage tank.

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#### 7. HANDLING AND STORAGE INFORMATION

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Store only in approved containers. Protect containers against physical damage. Outside or detached storage is preferred. Separate from oxidizing materials. Store in cool, well ventilated area of non-combustible construction away from possible sources of ignition. Keep away from incompatible materials and follow NFPA 30 for storage requirements.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**VENTILATION REQUIREMENTS:** Work in well ventilated areas using good engineering practices to process, transfer and store. Special ventilation is not required unless product is sprayed or heated. High volume use may require engineering controls.

**SPECIFIC PERSONAL PROTECTIVE EQUIPMENT**

**RESPIRATORY:** Respiratory protection is not required unless product is sprayed or heated. Use NIOSH approved respiratory protection following manufacturer's recommendations where spray, mists, or vapors may be generated. Supplied air respiratory protection is required for IDLH areas. See 29 CFR 1910.134 or Canadian Standard Association Z94.4-93 for regulations on respiratory protection.

**EYE:** Face shield and goggles or chemical goggles should be worn where mist or spray may be generated, and where splashing occurs. Shower and eyewash facilities should be accessible.

**GLOVES:** Impermeable protective gloves such as nitrile gloves should be worn during routine handling of this product. Barrier creams may also be appropriate where tactile sensitivity is required.

**OTHER CLOTHING AND EQUIPMENT:** Clothing contaminated with this product should be removed and laundered before reuse. Items which can not be laundered should be discarded. Allow contaminated items to air dry or hang in a well ventilated area.

**VENTILATION REQUIREMENTS:** Work in well ventilated areas; use good engineering to process, transfer and store; special ventilation is not required unless mist is produced or product is heated.

**EXPOSURE MONITORING**

**BIOLOGICAL:** No applicable procedure.

**PERSONAL/AREA:** Monitor for mineral oil mists using pre-weighed PVC filters and calibrated sampling pumps, in accordance with NIOSH Method 5026 or OSHA ID 128. Monitor for kerosene using both active and passive monitors employing charcoal adsorption followed by gas chromatography. An average molecular weight of 170 has been suggested as the average value to convert the determined weight of hydrocarbons to ppm. Direct reading colorimetric tubes are available to evaluate short term exposure.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**APPEARANCE AND ODOR:** Blue liquid with mild petroleum odor

**BOILING RANGE @ 760 mm Hg:** > 150 ° C ( 302° F) (estimated)

**VAPOR PRESSURE:** <0.1 mmHg @ 20 ° C

**VAPOR DENSITY (Air=1):** >>1

**VISCOSITY:** 4.8- 5.0 CST @ 40 ° C

**SPECIFIC GRAVITY (H<sub>2</sub>O=1):** 0.86- 0.87

**EVAPORATION RATE:** NA

**pH:** NA

**SOLUBILITY IN H<sub>2</sub>O % BY WT.:** Insoluble

**FREEZING POINT:** NA

**% VOLATILES BY VOL.:** NA

**DENSITY :** 861 KG/M3 @ 15 ° C

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**10. STABILITY AND REACTIVITY INFORMATION**

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**CONDITIONS CONTRIBUTING TO INSTABILITY:** Under normal conditions, the material is stable. Avoid sources of ignition such as flames, hot surfaces, sparks, and electrical equipment.

**INCOMPATIBILITY:** Avoid contact with strong oxidizers such as chlorine, fluorine, nitrogen tetroxide, concentrated oxygen, and sodium hypochlorite or other hypochlorites.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition products may include carbon monoxide, carbon dioxide, oxides of sulfur and nitrogen, zinc, and other toxic gases.

**HAZARDOUS POLYMERIZATION:** Material is not known to polymerize.

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**11. TOXICOLOGICAL INFORMATION**

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For further information, contact MSDS Assistance.

**12. ECOLOGICAL INFORMATION**

For further information, contact MSDS Assistance.

**13. DISPOSAL CONSIDERATIONS**

Shipment, storage, disposal, and cleanup actions of waste materials are regulated under local, provincial, and federal rules. Contact the appropriate agencies if uncertain of applicability.

**14. TRANSPORT INFORMATION**

<b>TDG PROPER SHIPPING NAME</b>	Not a TDG Regulated Material
<b>TDG HAZARD CLASS</b>	NA
<b>TDG I.D. NUMBER</b>	NA

**15. REGULATORY INFORMATION**

**WHMIS CLASS:** B3, COMBUSTIBLE LIQUID

This product and its components are listed in the Domestic Substances List as required under the Canadian Environmental Protection Act.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**16. OTHER INFORMATION**

**MSDS Prepared By:**

Ultramar Ltd

**NFPA (National Fire Protection Association) Hazard Ratings Codes\***

Fire	Health	Reactivity	Other
2	1	0	

\*Based on "Standard System for the Identification of the Fire Hazards of Materials, NFPA No. 704 M

This Material Safety Data Sheet was prepared by Ultramar Ltd in accordance with SOR/88-66. All information, recommendations and suggestions appearing herein concerning this product are based upon tests and data believed to be reliable, however, it is the user's responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee expressed or implied is made by Ultramar Ltd as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does Ultramar Ltd assume any liability arising out of use by others of the product referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or Desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.

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**Definitions of Material Safety Data Sheet Terminology**

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**GOVERNMENT AGENCIES AND PRIVATE ASSOCIATIONS**

**ACGIH** - American Conference of Governmental Industrial Hygienists, (private association)

**CSA** - Canadian Standards Association

**IARC** - International Agency for Research on Cancer, (private association)

**NFPA** - National Fire Protection Association, (private association)

**NIOSH** - National Institute of Occupational Safety and Health, U.S. Department of Health and Human Services

**NTP** - National Toxicology Program, (private association)

**OSHA** - Occupational Safety and Health Administration, U.S. Department of Labor

**TDG** – Canadian Regulations for the Transportation of Dangerous Goods

**WHMIS**- Workplace Hazardous Material Information System

**HAZARD AND EXPOSURE INFORMATION**

**Acute Hazard** - An adverse health effect which occurs rapidly as a result of short term exposure.

**CAS #** - American Chemical Society's Chemical Abstract service registry number which identifies the product and/or ingredients.

**Ceiling** - The concentration that should not be exceeded during any part of the working exposure **Chronic Hazard** - An adverse health effect which generally occurs as a result of long term exposure or short term exposure with delayed health effects and is of long duration

**Fire Hazard** - A material that poses a physical hazard by being flammable, combustible, phrophoric or an oxidizer as defined by 29 CFR 1910.1200

**Hazard Class** - DOT hazard classification

**Hazardous Ingredients** - Names of ingredients which have been identified as health hazards

**IDLH**- Immediately Dangerous to Life and Health, the airborne concentration below which a person can escape without respiratory protection and exposure up to 30 minutes, and not suffer debilitating or irreversible health effects. Established by NIOSH.

**mg/m<sup>3</sup>** - Milligrams of contaminant per cubic meter of air, a mass to volume ratio

**N/A** - Not available or no relevant information found

**NA** - Not applicable

**PEL** - OSHA permissible exposure limit; an action level of one half this value may be applicable

**ppm** - Part per million (one volume of vapor or gas in one million volumes of air)

**Pressure Hazard** - A material that poses a physical hazard due to the potential of a sudden release of pressure such as explosive or a compressed gas as defined by 29 CFR 1910.1200

**Reactive Hazard** - A material that poses a physical hazard due to the potential to become unstable reactive, water reactive or that is an organic peroxide as defined by 29 CFR 1910.1200.

**STEL** - The ACGIH Short-Term Exposure Limit, a 15-minute Time-Weighted Average exposure which should not be exceeded at any time during a workday, even if the 8-hour TWA is less than the TLV.

**TLV** - ACGIH Threshold Limit Value, represented herein as an 8-hour TWA concentration.

**8-hour TWA** - The time weighted average concentration for a normal 8-hour workday and a 40-hour workweek, to which nearly all workers may be repeatedly exposed, day after day, without adverse effect.

**W** - DO NOT ADD WATER - water reactive materials may produce toxic gas, extreme heat, or chemical reaction on contact with water.

**LD<sub>50</sub>** – Single dose of a substance that, when administered by a defined route in an animal assay, is expected to cause the death of 50% of the defined animal population.

**LC<sub>50</sub>** - The concentration of a substance in air that, when administered by means of inhalation over a specified length of time in an animal assay, is expected to cause the death of 50% of a defined animal population.