

MATERIAL SAFETY DATA SHEET

Revision Date: 4/30/03

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT: Emerald Premium HVI AW 46 Hydraulic Oil

MSDS NUMBER: 03002

PRODUCT CODE(S): EM318

O'Rourke Petroleum Products
223 McCarty Drive
Houston, Texas 77029

TELEPHONE NUMBERS

Spill Information: 713-6724500
Health Information: 713-672-4500
MSDS Assistance Number: 713-672-4500

SECTION 2

PRODUCT/INGREDIENTS

INGREDIENTS	CAS#	CONCENTRATION
Solvent-Dewaxed Heavy Paraffinic Distillates (petroleum)	64742-65-0	97 - 100 % weight
Pour Point De pressant	Mixture PPD	2 - Max % weight
Anti-Wear Additive	Mixture AWA	1 - Max. % weight

SECTION 3

HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Appearance & Odor: Light golden brown & Light, Mildly Petroleum Odor. Product floats on water.

Health Hazards: May cause slight skin irritation upon short-term direct contact. Prolonged and/or repeated contact may produce skin irritation and inflammation.

Physical Hazards: Slightly combustible (Flammability Class IIIB) but will burn. Heated product will produce colorless vapors. Heated vapors in the presence of an ignition source can be explosive, if confined.

NFPA Rating (Health, Fire, Reactivity): 1, 1, 0

Hazard Rating: Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

Inhalation:

This product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent aerosolization or misting of this product. The permissible exposure limit (PEL) and threshold limit value (TLV) for this product as oil mist is 5 MG/M3. Exposures below 5 MG/M3 appear to be without significant health risk. The short-term exposure limit for this product as an oil mist is 10 MG/M3.

Eye Irritation:

Test on similar materials suggest that no eye effect be expected. This product is practically non-irritating to the eyes upon direct contact. Based on testing of similar products and/or components.

Skin Contact:

Avoid skin contact. This product may cause slight skin irritation upon short-term direct contact. Based on testing of similar products and/or components. Prolonged or repeated contact may result in contact dermatitis, which is characterized by dryness, chapping, and reddening. Prolonged or repeated contact may also result in oil acne, which is characterized by blackheads with possible secondary infection.

Ingestion:

Do not ingest. This product is relatively non-toxic by ingestion. This product has laxative properties and may result in abdominal cramps and diarrhea.

Chronic:

Prolonged and/or repeated contact with this material may produce skin irritation and inflammation. On rare

occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations. Shortness of breath and cough are the most common symptoms.

Carcinogen listed by:

National Toxicology Program (NO)

I.A.R.C. (NO)

OSHA (NO)

ACGIH (NO)

This product does not require a cancer hazard warning in accordance with the OSHA Hazard Communication Standard.

Aggravated Medical Conditions:

Personnel with pre-existing skin disorders should avoid contact with this product. This condition may make the skin more susceptible to other irritants, sensitizers, and diseases.

Health studies have shown that many petroleum products and synthetic lubricants pose potential human health risks, which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

SECTION 4	FIRST AID MEASURES
------------------	---------------------------

Inhalation:

Vapor pressure is very low. Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor from hot product, immediately remove from exposure and call a physician. If breathing is irregular or has stopped, start resuscitation; administer oxygen, if available. If overexposed to oil mist, remove from exposure until excessive oil mist condition subsides

Skin:

In case of skin contact, remove any contaminated clothing and wash skin with soap and water. Launder or dry-clean clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as an emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury. Prolonged or repeated skin contact may cause skin irritation.

Eye:

If splashed into eyes, immediately flush with water for 15 minutes or until irritation subsides. If material is hot, treat for thermal burns and take victim to hospital. If irritation persists, call a physician.

Ingestion:

Product is practically non-toxic. Do not induce vomiting. Obtain emergency medical attention.

SECTION 5	FIRE FIGHTING MEASURES
------------------	-------------------------------

FLAMMABLE PROPERTIES

FLASH POINT:	>425 ^o F COC ASTM D92
AUTO IGNITION:	636 ^o F
FLAMMABILITY CLASS:	IIIB
LOWER EXPLOSIVE LIMIT (%):	NOT DETERMEINDED
UPPER EXPLOSIVE LIMIT (%):	NOT DETERMINED

Fire and Explosion Hazards:

Slightly combustible. OSHA/NFPA Class IIIB Combustible Liquid. If heated above its flash point will release flammable vapors which can burn in the open or be explosive in confined spaces if exposed to ignition source. Mists or sprays may be flammable below oils normal flash point. Keep away from extreme heat or open flame.

Extinguishing Media:

Foam, water spray (fog), dry chemical, carbon dioxide, and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product.

Fire Fighting Instructions:

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association's "Fire Protection Guide on Hazardous Materials", Tenth Edition (1991):

Use water spray, dry chemical, foam or carbon dioxide to extinguish the fire. Use water to keep fire-exposed containers cool. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. If a leak or spill has not ignited, use water spray to disperse the vapors and to provide protection for persons attempting to stop a leak. Water spray may be used to flush spills away from exposures. Minimize breathing of gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

Decomposition Products Under Fire Condition:

Fumes, smoke, carbon monoxide, aldehydes and other decomposition products, may be generated as products of combustion.

SECTION 6**ACCIDENTAL RELEASE MEASURES****Clean Water Act/Oil Pollution Act:**

This product may be classified as an oil under Section 311 of the Clean Water Act, and under the Oil Pollution Act. Discharges or spills that enter a water body must be immediately reported to the National Response Center 1-800-424-8802.

Steps To Be Taken In case Material Is Released Or Spilled:

Notify appropriate authorities of spill. This material will float on water and will be transported by storm water runoff. Spills to the ground should be immobilized and removed immediately. Spills to watercourses such as storm drains, sewers, ditches, streams, ponds, etc., must be contained with dikes, dams, floating booms, pads, etc. as appropriate. Recover free product. Absorb with appropriate inert materials such as sand, clay, earth or other suitable absorbent to spill area. Remove all sources of ignition. Minimize skin contact. Advise authorities if product has entered or may enter sewers, watercourses, or extensive land areas. Assure conformity with applicable governmental regulations.

SECTION 7**HANDLING AND STORAGE****Precautionary Measures:**

Keep away from flames, sparks, oxidizing materials or hot surfaces. Never use a torch to cut or weld on or near container. Empty oil containers can contain explosive vapors. NFPA Class III B storage. Wash thoroughly after handling. This product is not classified as hazardous under DOT regulations. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106 – Flammable and Combustible Liquids.

Work/Hygienic Practices

Wash hands with soap and water before eating, drinking, smoking or use of toilet facilities. Do not use gasoline, solvents, kerosene, or harsh abrasive skin cleaners for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

'Empty' Container Warning;

"Empty" containers retain residue (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.

Do not attempt to refill or clean containers since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage:

Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Container Warnings:

Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/Face Protection:

Use safety glasses or splash goggles when eye contact may occur. Have suitable eye wash water available.

Skin Protection:

Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious clothing (gloves, boots, aprons, etc.). If handling hot material, use insulated protective clothing (gloves, boots, aprons, etc.). Acceptable materials for gloves are polyvinyl chloride; neoprene; nitrile; polyvinyl alcohol; viton. Launder soiled clothes. Properly dispose of contaminated leather articles including shoes, which cannot be decontaminated.

Respiratory Protection:

Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the material is heated or handled, use an organic vapor respirator with a dust or mist filter. All respirators must be NIOSH/MSH certified. DO NOT USE COMPRESSES OXYGEN IN HYDROCARBON ATMOSPHERES.

Ventilation:

If vapor or mist is generated when the material is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specific exposure or flammable limits. No smoking, or use of flame or other ignition sources.

Other:

Consumption of food and beverages should be avoided in work areas where hydrocarbons are present. Always wash hands and face with soap and water before eating, drinking, or smoking. Affix warning labels on containers in accordance with 29 CFR 1910.1200 (Hazard Communication Standard).

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Light golden brown liquid – Mild Petroleum Odor

Substance Chemical Family: Lubricants

Basic Physical Proprieties:

Physical State:	Liquid
Boiling Point:	IBP N/A °F
Melting Point:	Pour point -15°F
Vapor Pressure:	N/A mm Hg @ 20°
Vapor Density (Air = 1)	N/A
Specific Gravity:	0.8734 Water = 1
Molecular Weight:	445.00
Packing Density:	N/A
Solubility (H ₂ O):	Negligible in water
Percent Volatiles:	N/A
Volatile Organic Compounds (VOC) Content :	N/A
Evaporation Rate :	N/A

pH:
Viscosity:

Essentially neutral
N/A SUS at 100⁰F

SECTION 10	REACTIVITY AND STABILITY
-------------------	---------------------------------

Stability:

Stable. Will not react violently with water.

Conditions to Avoid:

Source of ignition.

Incompatible Materials:

May react with strong oxidizers such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc., as this presents a serious explosion hazard.

Hazardous Decomposition Products:

Combustion may produce carbon monoxide and other asphyxiants.

Hazardous Polymerization:

Will not occur

SECTION 11	TOXICOLOGICAL INFORMATION
-------------------	----------------------------------

Acute Studies:

Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

Eye Effects:

Product contacting the eyes may cause eye irritation.

Skin Effects:

Prolonged or repeated skin contact with this product tends to remove skin oils, possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria.

Acute Oral Effects:

Product has a low order of acute and dermal toxicity but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

Acute Inhalation Effects:

Product has a low order of acute and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

In accordance with the current OSHA Hazard Communication Standard criteria, this product does not require a cancer hazard warning. This is because the product is formulated from base stocks which are severely hydrotreated, severely solvent extracted, and/or processed by mild hydrotreatment and extraction. Alternatively, it may consist of components not otherwise affected by IARC criteria, such as atmospheric distillates or synthetically derived materials, and as such is not characterized by current IARC classification criteria.

SECTION 12	ECOLOGICAL INFORMATION
-------------------	-------------------------------

If applied to leaves, this product may kill grasses and small plants by interfering with transpiration and respiration. This product is not toxic to fish but may coat gill structures resulting in suffocation if spilled in shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastrointestinal distress to birds and mammals through ingestion during pelage grooming.

This product is rapidly biodegradable. Biodegradation is possible within 90 to 120 days in aerobic environment at

temperatures above 70°F.

SECTION 13	DISPOSAL CONSIDERATIONS
-------------------	--------------------------------

Waste Disposal Method:

Under RCRA, it is the responsibility of the user of the material to determine, at the time of the disposal, whether the material meets RCRA criteria for hazardous waste. This is because material uses, transformations, mixtures, processes, etc. may affect the classification. Refer to the latest EPA, state and local regulations regarding proper disposal.

DO NOT dispose of this product in drains or storm sewers. DO NOT dispose of this product in a landfill without prior solidification. Department of transportation (DOT) Regulations may apply for transporting this material when spilled. Materials should be recycled if possible. Consider waste brokering.

SECTION 14	TRANSPORT INFORMATION
-------------------	------------------------------

US Department of Transportation Classification

Not hazardous by DOT Regulation

Hazard Class:

III B

DOT Identification Number:

NOT APPLICABLE

SECTION 15	REGULATORY INFORMATION
-------------------	-------------------------------

Federal Regulatory Status

OSHA Classification:

SARA 302 Threshold Planning Quantity:	NOT APPLICABLE		
SARA 304 Reportable Quantity:	NOT APPLICABLE		
SARA 311 Categories:	Immediate (Acute) Health Effects	--	N
	Delayed (Chronic) Health Effects	--	Y
	Fire Hazard	--	N
	Sudden Release of Pressure Hazard	--	N
	Reactivity Hazard	--	N

EPA/TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA): No chemicals in this product are subject to the reporting requirements of CERCLA.

SARA Title III – Section 313 Supplier Notification: No chemicals in this product exceed the De Minimums reporting level established by SARA Title III, Section 313 and 40 CFR 372.

European (ECC) Regulatory Information:

This product is listed on the European Inventory of Existing Commercial Substances.

Canadian Regulatory Information:

This product is listed on the Canadian (DSL) Domestic Substances List.

WHMIS Classification: NOT CONTROLLED

DOT:

Not regulated

SECTION 16	OTHER INFORMATION
-------------------	--------------------------

HMIS Rating (Health, Fire, Reactivity): 1, 1, 0

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:

The information contained herein is based upon data believed to be reliable and reflects our best professional judgment. Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein and assume no responsibility regarding the suitability of this information for the user's intended purpose or for the consequence of its use. Each individual should make a determination as to the suitability of the information for his/her particular purpose(s).