

**#4 REPROCESSED FUEL OIL
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA**

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: #4 REPROCESSED FUEL OIL

SYNONYMS: RECYLCED FUEL OIL (RFO)

PRODUCT CODE: Not applicable

PRODUCT USE: Industrial grade fuel oil.
If this product is used in combination with other products, refer to the
Material Safety Data Sheet.

This number is for emergency
use only. If you desire non-emergency
product information, please call a
phone number listed below.

**24-HOUR EMERGENCY PHONE NUMBERS
MEDICAL AND TRANSPORTATION (SPILL):**

1-800-468-1760

SUPPLIER: Parman Energy
7101 Cockrill Bend Blvd
Nashville, TN 37209
USA
1-800-727-7920
www.parmanenergy.com

TECHNICAL INFORMATION: 1-800-669-5740 Press 1, then 1, then Extension 7500

MSDS FORM NUMBER: 820050

ISSUE: September 30, 2008

ORIGINAL ISSUE: September 30, 2008

SUPERSEDES: N/A

PREPARED BY: Product MSDS Coordinator

APPROVED BY: MSDS Task Force

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>WT%</u>	<u>NAME</u>	<u>SYNONYM</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>		<u>ACGIH TLV®</u>		<u>LD^a</u>	<u>LC^b</u>
				<u>TWA</u>	<u>STEL</u>	<u>TWA</u>	<u>STEL</u>		
80 to 100	Lubricating oils, used	Used oil	70514-12-4	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 20*	Water/solids	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 10*	Hydrocarbon solvents. May include gasoline, diesel fuel, jet fuel, mineral spirits, etc.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 1.5*	Metals. May include lead, iron, zinc, copper, chromium, arsenic, nickel, and others: each below 1.0 WT%.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 1.0*	Polynuclear aromatics. May include naphthalene, fluoranthene, phenathrene, pyrene, and others: each below 0.3 WT%.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 0.5*	Chlorinated solvents.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.

N. Av. = Not Available * Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product. ^aOral-Rat LD₅₀(mg/kg) ^bInhalation-Ray LC₅₀

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE

Liquid, black and viscous (thick), petroleum odor.

WARNING!

PHYSICAL HAZARDS

Combustible liquid.

HEALTH HAZARDS

May be harmful if inhaled.

May be harmful if absorbed through skin.

May be harmful or fatal if swallowed.

May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin.

Suspect cancer hazard. Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Contains material which can cause birth defects.

Contains material which can cause central nervous system damage.

ENVIRONMENTAL HAZARDS

Product may be toxic to fish, plants, wildlife, and/or domestic animals.

POTENTIAL HEALTH EFFECTS

Effects may vary depending on material composition. Typical effects may include.

INHALATION (Breathing):

High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

EYES:

May cause irritation.

SKIN:

May cause irritation. Product may be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING)**.

INGESTION (SWALLOWING):

May be harmful or fatal if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Individuals with pre-existing cardiovascular, liver, kidney, respiratory tract (nose, throat, and lungs), central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

CHRONIC:

Prolonged or repeated inhalation may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation, and/or toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

CANCER INFORMATION:

This product contains mineral oils, untreated or mildly treated, which can cause cancer. This product may contain hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics which can cause cancer. Risk of cancer depends on duration and level of exposure. For more information, see **SECTION 11: CARCINOGENICITY**.

POTENTIAL ENVIRONMENTAL EFFECTS

Product may be toxic to fish, plants, wildlife, and/or domestic animals.

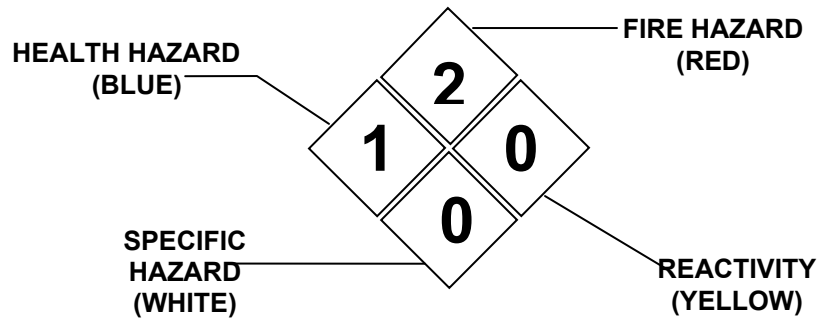
Not available. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

SECTION 4: FIRST AID MEASURES

INHALATION (BREATHING):	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.
EYES:	If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.
SKIN:	Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.
INGESTION (SWALLOWING):	Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.
NOTE TO PHYSICIANS:	Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

SECTION 5: FIRE FIGHTING MEASURES

FLASHPOINT:	>100F (93°C)(minimum) Pensky-Martens Closed Cup
FLAMMABLE LIMITS IN AIR:	Not available.
AUTOIGNITION TEMPERATURE:	Not available.
HAZARDOUS COMBUSTION PRODUCTS:	Decomposition and combustion materials may be toxic. Burning may produce phosphene gas, nitrogen oxides, carbon monoxide, and unidentified organic compounds.
CONDITIONS OF FLAMMABILITY:	Heat, sparks, or flame. Product may burn, but does not ignite readily.
PROTECTIVE EQUIPMENT FOR FIREFIGHTERS:	A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.
EXTINGUISHING MEDIA:	Carbon dioxide, regular foam, dry chemical, water spray, or water fog.
NFPA 704 HAZARD IDENTIFICATION:	This information is intended solely for the use by individual trained in this system.



FIRE FIGHTING INSTRUCTIONS:

Keep storage containers cool with water spray.

FIRE AND EXPLOSION HAZARDS:

Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal.

Additionally, for large spills: Water sprays may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION**.

SECTION 7: HANDLING AND STORAGE

HANDLING:

Keep away from sparks or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean tools. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. These products have a low vapor pressure and are not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating these products, do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product.

SHIPPING AND STORING: Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from flame, sparks, static electricity, or to the resources of ignition. Empty product containers may retain product residue and can be dangerous.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use general ventilation, process enclosures, local exhaust ventilation, or other engineering controls to control air-borne levels. Where explosive mixtures may be present, equipment safe for such locations should be used.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: A respiratory protection program which meets USA's OSHA General Industry Standard 29 CFR 1910.134 or Canada's CSA Standard Z94.4-M1982 requirements must be followed whenever workplace conditions warrant a respirator's use. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

EYE PROTECTION: Wearing chemical goggles is recommended. Contact lens may be worn with eye protection.

SKIN PROTECTION: Where prolonged or repeated skin contact is likely, wear neoprene, nitrile (4 mil minimum), PVC (polyvinyl chloride), or equivalent protective gloves; wearing natural rubber or equivalent gloves is not recommended.

When product is heated and skin contact is likely, wear heat-insulating gloves, boots, and other protective clothing.

To avoid prolonged or repeated contact where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

PERSONAL HYGIENE: Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with the product.

OTHER PROTECTIVE EQUIPMENT: Where spills and splashes are likely, facilities storing or using these products should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE, AND ODOR:	Liquid, black and viscous (thick), petroleum odor.
ODOR THRESHOLD:	Not available
MOLECULAR WEIGHT:	Not applicable
SPECIFIC GRAVITY:	0.8 to 1.0 60°F (15.6°C) (water=1)
DENSITY:	6.7 to 8.3 LB/US gal (800 to 1000 g/l) (approximately)
VAPOR DENSITY:	greater than 1 (air=1) (based on kerosene)
VAPOR PRESSURE:	Not available.
BOILING POINT:	Not available
FREEZING/MELTING POINT:	Not available
pH:	Not applicable
EVAPORATION RATE:	less than 1 (butyl acetate=1)
SOLUBILITY IN WATER:	Slight.
FLASH POINT:	>100°F (93°C) (minimum) Pensky-Martens Closed Cup
FLAMMABLE LIMITS IN AIR:	Not available
AUTOIGNITION TEMPERATURE:	Not available

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal temperatures and pressures. Avoid heat, sparks, or flame.
INCOMPATIBILITY:	Avoid oxidizing agents, acids alkalies, reducing agents, reactive metals and reactive halogens.
REACTIVITY:	Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.
HAZARDOUS DECOMPOSITION PRODUCTS:	None under normal temperatures and pressures. See also SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.

SECTION 11: TOXICOLOGICAL INFORMATION

- SENSITIZATION:** Based on best current information, there may be known human sensitization associated with this product.
- MUTAGENICITY:** Based on best current information, there may be mutagenicity associated with this product.
- CARCINOGENICITY:** Mineral oils, untreated or mildly treated are listed by IARC as a known carcinogen. Mineral oils, untreated or mildly treated are classified by NTP as having limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.

There may be hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics present in this product which are listed by OSHA as known carcinogens. There may be hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics present in this product which are listed by IARC as known, probable, or possible carcinogens. There may be hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics present in this product which are classified by NTP as known carcinogens or as having limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals. There may be hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics present in this product which are recognized by ACGIH as confirmed or suspected human carcinogens.

Also see **SECTION 3: CANCER INFORMATION.**

- REPRODUCTIVE TOXICITY:** Based on best current information, there may be reproductive toxicity associated with this product.
- TERATOGENICITY:** Based on best current information, there may be teratogenicity associated with this product.
- TOXICOLOGICALLY SYNERGISTIC PRODUCTS:** Based on best current information, there may be toxicologically synergistic products associated with this product.

SECTION 12: ECOLOGICAL INFORMATION

- ECOTOXICITY:** Not available.
- OCTANOL/WATER PARTITION COEFFICIENT:** Not available
- VOLATILE ORGANIC COMPOUNDS:** Not available As per 40 CFR Part 51.100(s).

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

DOT:

100°F ≤ Flashpoint < 200°F NA1993, Combustible liquid, NOS (diesel, jetfuel), PG III
Flashpoint 200°F Not regulated.

TDG:

100°F ≤ Flashpoint < 200°F NA1993, Combustible liquid, NOS (diesel, jetfuel), PG III
Flashpoint 200°F Not regulated.

EMERGENCY RESPONSE Not applicable.

GUIDE NUMBER: Reference *North American Emergency Response Guidebook*

SECTION 15: REGULATORY INFORMATION

40 CFR 279.11 This product meets the definition of “on-specification used oil fuel”.

Constituent/property	Allowable level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash point	100 degF maximum
Total halogens	4000 ppg maximum
Polychlorinated Biphenyls(PCBs)	<2 ppm maximum

USA REGULATIONS

**SARA SECTIONS
302 AND 304:**

Based on the ingredient(s) listed in **SECTION 2**, this product does not contain any “extremely hazardous substances” listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

**SARA SECTIONS
311 AND 312:**

This product poses the following health hazard(s) as defined in 40 CFR Part 370 and are subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard

**SARA SECTION
313:**

This product may contain “toxic” chemical(s) subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40

CFR Part 372.

CERCLA: This product may contain any “hazardous substances” listed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

TSCA: Not available.

CALIFORNIA: This product is not for sale or use in the State of California.

CANADIAN REGULATIONS

WHMIS: Not regulated.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): Not available.

SECTION 16: OTHER INFORMATION

REVISION INFORMATION: New MSDS

LABEL/OTHER INFORMATION: Not Available