



## **NO. 6 FUEL OIL**

### **Material Safety Data Sheet**

#### **SECTION I**

#### **PRODUCT IDENTIFICATION**

Manufacturer's Name:	Countrymark Refining and Logistics, LLC
Address:	1200 Refinery Road Mt. Vernon, Indiana 47620
Emergency Telephone Number:	800-424-9300 (Chemtrec)
Trade Name:	#6 Fuel Oil
Chemical Name:	Heavy Residual Fuels
Chemical Family:	Hydrocarbon
CAS Registry Number:	(See SECTION II)

#### **SECTION II**

#### **HAZARDOUS INGREDIENTS**

NO. 6 FUEL OIL is manufactured to meet Standard Specification for Fuel Oils (ASTM D396) by blending high viscosity atmospheric tower bottoms (CAS 64741-45-3) and vacuum tower bottoms (CAS 64741-56-6) with lower viscosity catalytic cracked clarified oil (CAS 64741-57-57) to meet the viscosity specifications desired. The specific refinery streams used and the volumes used are dependent on the economic consequences of market alternatives and the target viscosity specification. Heavy residual fuels are complex mixtures of relatively high molecular weight compounds. Since they are blended from fractions with boiling points ranging from 650° to 1,200° F, the typical molecular weight range of the compounds is 600 to 1,000. Compound types include asphaltenes, polar aromatics, naphthene-aromatics, saturated hydrocarbons and heteromolecules containing sulfur, oxygen, nitrogen and metals. Fuels blended with catalytic cracked clarified oil contain some high molecular weight olefins and mixed aromatic-olefins. These cracked stocks contain greater proportions of highly condensed aromatics and fewer mixed aromatic and nonaromatic cycloparaffinic compounds than straight run stocks. The other commonly used blending stocks have lower molecular weight ranges than straight run residuals and are themselves complex mixtures that are difficult to characterize in detail. Appreciable concentrations of polynuclear aromatic hydrocarbons could be present in heavy residual fuels as a result of the nature of the blending stocks used and the common practice of including both crude and cracked residuals in the manufacture of the fuels.

#### **SECTION III**

#### **PHYSICAL DATA**

Boiling Point (° F)	650 to 1200
Specific Gravity (H <sub>2</sub> O = 1) at 60° F	0.95 to 1.00
Vapor Pressure (mm. Hg.) @ 60° F	< 10
Percent Volatile by Volume (%)	None Expected
Solubility in Water	Insoluble
Viscosity	45 to 300 SFS @ 122° F

Appearance and Odor:

Dark or black-colored high viscosity liquid requiring heated storage to enable pumping and preheating at the burner to permit atomization. Material has distinct petroleum odor.

**SECTION IV**

**FIRE AND EXPLOSION HAZARD DATA**

Flash Point (PM)

> 150° F

Classification:

Flammable Liquid NA 1993

Flammable Limits:

LEL N/A UEL N/A

Extinguishing Media:

Small Fires:

Dry Chemical, Carbon Dioxide, water spray, or foam.

Large Fires:

Water spray, fog, or foam

Hazardous Decomposition Products:

**WARNING:** Hydrogen Sulfide (H<sub>2</sub>S) and other hazardous vapors may evolve and collect in the headspace of storage tanks or other enclosed vessels. Hydrogen sulfide is an extremely flammable and highly toxic gas. Incomplete combustion may form toxic materials: Carbon Dioxide and Carbon Monoxide, plus various unidentified organic hydrocarbons may be formed.

Special Fire Fighting Procedures:

Cool containers with water spray to prevent re-ignition.

Unusual Fire and Explosion Hazards:

Avoid heat, open flames, and oxidizing agents such as Chlorine, Permanganates, and Dichromates.

**SECTION V**

**HEALTH HAZARD**

Threshold Limit Value:

No applicable information was found.

Effects of Overexposure:

None expected under normal conditions of use.

Emergency and First Aid Procedures:

IF IN EYES - Flush with large amounts of water, lifting upper and lower lids occasionally. Get medical attention.

IF ON SKIN - Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before reusing.

IF INHALED - If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep person warm, quiet, and get medical attention.

IF SWALLOWED - Do not induce vomiting. Keep person warm, quiet and get medical attention.

**SECTION VI**

**REACTIVITY DATA**

Stable X Unstable \_\_\_\_\_

Incompatibility (Materials to avoid): Avoid contact with strong oxidizing agents like Chlorine, Permanganates, and Dichromates.

Hazardous Decomposition Products:

May form toxic materials of Carbon Dioxide, Carbon Monoxide, various hydrocarbons, etc. as combustion by-products.

Hazardous Polymerization: May Occur \_\_\_\_ Will Not Occur X

## **SECTION VII**

## **SPILL OR LEAK PROCEDURES**

Steps to be taken in case material is released:

Small Spill: Eliminate all ignition sources (smoking, flares, flames, including pilot lights, electrical sparks, and etc.). Absorb liquid on paper, vermiculite, floor absorbent, or other absorbent material and place in non-leaking container for proper disposal.

Large Spill: Eliminate all ignition sources (smoking, flares, flames, including pilot lights, electrical sparks, and etc.). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank or truck. Remaining liquid may be taken up on sand, clay, earth, floor absorbent or other absorbent material and shoveled into non-leaking containers for proper disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required.

Waste Disposal Method:

Small Spill: Contaminated absorbent may be deposited in a landfill in accordance with local, state and federal regulations.

Large Spill: Reclaim as much as possible for reprocessing or salvage. Destroy by liquid incineration. Contaminated absorbent may be deposited in a landfill in accordance with local, state and federal regulations.

## **SECTION VIII**

## **SPECIAL PROTECTION INFORMATION**

Respiratory Protection:

Normally not needed for normal exposure. A NIOSH/MSHA jointly approved air supplied respirator is advised in absence of proper environmental control. Firefighters require SCBA Positive Pressure Breathing Apparatus when involved in petroleum fires.

Ventilation:

Normally ventilation is not required for usual conditions of use. If ventilation is needed, explosion proof motors and fans are required to provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(S).

Personal Protective Equipment and Apparel:

Gloves: Wear petroleum resistant gloves such as: Neoprene, Nitrile, rubber gloves, etc.

Eye Protection: Safety goggles or face shield for protection from splashing in eyes.

Other Protective Equipment: Wear impervious protective clothing and boots appropriate for work situations to prevent repeated or prolonged skin contact. Launder contaminated clothing before wearing.

## **SECTION IX**

## **SPECIAL PRECAUTIONS**

Precautions to be taken when handling and storing:

Keep all containers in upright position. Store in a cool, dry, well ventilated area away from heat, ignition, and strong oxidizers. Do not allow smoking in areas of use or dispensing. Motors, fans, switches, and etc. in area of use or dispensing should be explosion proof. Ground containers when filling. Prevent all static and electric sparks.

**Other Precautions:**

Have written confined space and tank entry procedures. Never allow tank entry without checking OXYGEN AND VAPOR levels.

WARNING: Hydrogen Sulfide (H<sub>2</sub>S) and other hazardous vapors may evolve and collect in the headspace of storage tanks or other enclosed vessels. Hydrogen sulfide is an extremely flammable and highly toxic gas. Use safety harness and safety line on person entering a tank. Stand-by person required with protective equipment available.

**SECTION X**

**TOXICOLOGICAL INFORMATION**

No applicable information was found.

**SECTION XI**

**DOT LABELING INFORMATION**

Proper Shipping Name:	Heavy Residual Fuels
Hazardous Classification:	Flammable Liquid, 3, NA 1993, PG III (DOT ERG No. 27)
Identification Number:	NA 1993
Label(s) Required:	Flammable Liquid

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