

# MSDS - Material Safety Data Sheet

## Product Name: #6 RESIDUAL FUEL OIL

MSDS No.: SER12

### I. Basic Information:

**Manufacturer:** Silver Eagle Refining, Woods Cross Inc.

**Address:** P.O. Box 870298, 2355 South 1100 West

**City, ST Zip:** Woods Cross, UT 84087

**Emergency Contact:** Kerry Carroll

**Emergency Telephone Number:** 801-556-6494

**Contact:** Kerry B. Carroll/Blaine Zwahlen

**Information Telephone Number:** 801-298-3211

**Last Update:** 09/30/2003

**Expiration Date:**

**Chemical State:**  Liquid  Gas  Solid

**Chemical Type:**  Pure  Mixture



1	Health
2	Flammability
0	Reactivity
	Pers. Protection

### II. Ingredients:

Trade Secret

CAS No.	Chemical Name	% Range	EHS		IARC		SARA		OSHA PEL	ACGIH TLV	Other Limits
			NTP		SUB Z	313					
68476-33-5	FUEL OIL:RESIDUAL	100									

### III. Hazardous Identification:

**Hazard Category:**

Acute  Chronic  Fire  Pressure  Reactive

#### Hazardous Identification Information:

**Emergency Overview:** This product is from various refinery streams, usually residues. The composition is complex and varies with the source of crude oil. The autoignition temperature is approximately 765 F with a flash point of about 150 F. This product is volatile and gives off invisible vapors.

**EYES:** Flush eyes with large amounts of water while holding the eyelids open for at least 15 minutes. Get medical attention if irritation persists.

**SKIN:** Immediately contact a physician for treatment of thermal burns. In case of skin contact under other conditions, wash skin immediately with soap and water and remove contaminated clothing and shoes. Get medical attention if irritation persists. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**INHALATION:** Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms continue.

**INGESTION:** If swallowed, DO NOT INDUCE VOMITING. Give the person a glass of water or glass of milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.

### IV. First Aid Measures:

**Route(s) of Entry:**

Eyes, Skin, Inhalation, and Ingestion

**Health Hazards (Acute and Chronic):**

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**EYE CONTACT:** Eye contact with hot product may cause thermal burns. Product contacting the eyes may cause eye irritation.

**SKIN CONTACT:** Contact with hot product may cause thermal burns. Prolonged or repeated contact with product at warm or near ambient temperatures may cause skin irritation. Caution: Product normally shipped hot (e.g., 110-245 F); protect against burns.

Does not penetrate the skin in quantities sufficient to cause adverse health effects.

**INHALATION:** High vapor concentrations may cause eye and respiratory irritation, dizziness, headaches, gasping, nausea, disorientation, unconsciousness and possibly death. Inhalation of components of exhaust from burning, such as carbon monoxide, may cause death at high concentrations.

**INGESTION:** Gastrointestinal irritation, vomiting, if aspirated into the lungs secondary to vomiting pneumonitis and pulmonary edema may result.

**Signs and Symptoms:**

Product may contain components or petroleum fractions that have been shown to cause skin cancer in lifetime animal skin painting tests. In these tests, the substance was applied to the shaved backs of mice at regular intervals without cleanup between applications. In view of these findings, there may be a potential risk of skin cancer in humans from prolonged and repeated skin contact with this product in the absence of good personal hygiene. Long-term repeated exposure of laboratory animals to whole diesel exhaust has resulted in an increased incidence of lung cancer. Potential risks to humans can be minimized by observing good work practices and personal hygiene procedures generally recommended for petroleum products.

**Medical Conditions Generally Aggravated by Exposure:**

Petroleum solvents/petroleum hydrocarbons - Skin contact may aggravate an existing dermatitis

**Emergency and First Aid Procedures:**

**EYES:** Flush eyes with large amounts of water while holding the eyelids open for at least 15 minutes. Get medical attention if irritation persist.

**SKIN:** Wash skin immediately with soap and water and remove contaminated clothing and shoes. Get medical attention if irritation persist. Discard contaminated clothing and shoes or thoroughly clean before reuse. In case of thermal burns, protect injured area from contamination and seek medical attention immediately.

**RESPIRATORY:** Minimize breathing vapor, mist or fumes. Use supplied air protection in confined or enclosed spaces when handling hot product, if needed.

**VENTILATION:** Use local exhaust to capture vapor, mists, or fumes if necessary. Provide ventilation to minimize inhalation exposure and prevent buildup of explosive concentrations of vapor in air. No smoking, or use of flame or other ignition sources.

**Other Health Warnings:**

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

**V. Fire Fighting Measures:**

**Flash Point:** 150 F

**Lower Explosive Limit:** .9 %

**Upper Explosive Limit:** 7.0%

**F.P. Method:** ASTM D93

**Fire Extinguishing Media:** Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

**Special Fire Fighting Procedures:**

Use water spray, dry chemical, foam or carbon dioxide to extinguish the fire. Use water to keep fire-exposed containers cool. 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.

**Unusual Fire and Explosion:**

Fumes, smoke, carbon monoxide, sulfur oxides, hydrogen sulfide, aldehydes and other decomposition products may occur in the case of incomplete combustion. This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

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### VI. Accidental Release Measures:

**Steps to be Taken in Case Material is Released or Spilled:**

Discharges or spills into or leading to surface waters that cause a sheen must be reported to the National Response Center at 1-800-424-8802. Recover all free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors and skin contact. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas.

### VII. Handling and Storage:

**Precautions to be Taken:**

Keep containers closed when not in use. Do not store near heat, sparks, flame or strong oxidants.

**Other Precautions:**

Use splash goggles or face shield when eye contact may occur.

### VIII. Exposure Controls/Personal Protection:

**Ventilation Requirements:**

Use local exhaust to capture vapor, mists or fumes, if necessary. Provide ventilation to minimize inhalation exposure and prevent buildup of explosive concentrations of vapor in air. No smoking, or use of flame or other ignition sources.

**Personal Protective Equipment:**

Use chemical-resistant gloves to avoid skin contact and chemical-resistant apron or other impervious clothing to avoid contaminating regular clothing. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period.

### IX. Physical and Chemical Properties:

**Boiling Point:** Not determined

**Melting Point:**

**Evaporation Rate (Butyl Acetate = 1):**

**Vapor Pressure (mm Hg.):** <0.1%

**Specific Gravity (H2O = 1):** 0.95000

**Vapor Density (AIR = 1):** >5

**Solubility In Water:** Negligible

**Appearance and Odor:** Black liquid, strong asphaltic odor

**Other Information:** Specific Gravity of 0.95 (Water = 1)

Vapor Pressure of less than 0.1 mm Hg @ 20 C

Polymerization will not occur.

pH is essentially neutral.

### X. Stability and Reactivity:

**Stability:**

Stable

**Incompatibility (Materials to Avoid):**

Strong oxidizers

**Decomposition/By Products:**

**Hazardous Polymerization:**

Will not occur

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### ***XI. Toxicological Information:***

ORAL: 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 pulmonay injury and possibly death. This product is judged to have an acute oral LD50 (rat) greater than 5 g/kg of body weight, and an acute dermal LD50 (rabbit) greater than 3.16 g/kg of body weight.

INHALATION: This product contains ethylbenzene. A draft report on a study conducted by the National Toxicology Program states that lifetime inhalation exposure of rats and mice to high concentrations of ethylbenzene (750 ppm) resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations of ethylbenzene (75 or 250 ppm). The draft report does not address the relevance of these results to humans.

DERMAL: See oral.

### ***XII. Ecological Information:***

No ecological testing of this material has been completed.

### ***XIII. Disposal Considerations:***

Dispose of according to all Federal, State and local regulations.

"Empty" Container Warning: Empty containers retain residue (liquid, and/or vapors) 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.

### ***XIV. Transport Information:***

In case of transportation spills call Chemtrec (800) 424-9300.

Transport, handle and store in accordance with OSHA Regulation 1910.106, and applicable D.O.T. regulations.

D.O.T. Shipping Name: Combustible Liquid, N.O.S.

D.O.T. Hazard Class Combustible Liquid, UN 1993

Bulk Packagings (capacity >119 gals.) Fuel Oil, Combustible Liquid, NA 1993, III

Non-bulk Packagings <119 gals.) Not regulated.

### ***XV. Regulatory Information:***

THRESHOLD PLANNING QUANTITY (TPQ) : EPA Regulation 40 CFR 355 (SARA Sections 301-304): No TPQ for product or any constiuent greater than 1% or 0.1% (carcinogen).

TOXIC CHEMICAL RELEASE REPORTING, EPA Regulation 40 CFR 372 (SARA Section 313): No toxic chemical is present greater than 1% or 0.1% (carcinogen).

HAZARDOUS CHEMICAL REPORTING, EPA Regulation 40 CFR 370 (SARA Sections 311-312): EPA Hazard Classification Codes; Chronic, Fire.

### ***XVI. Other Information:***

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 into or leading to surface watsr that cause a sheen must be reported to the National Response Center (1-800-424-8802). recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses, or extensive land areas.

This material safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but cannot gurantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all appropriate laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.