



MATERIAL SAFETY DATA SHEET

MSDS # L6

ARCTIC FIRE MEDIUM CUTTING FLUID

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Arctic Fire Medium Cutting Fluid

APPLICATIONS: Metalworking cutting fluid

PRODUCT CODES:

EMERGENCY PHONE: CHEMTREC – (800) 424-9300 or (703) 527-3887 (collect)

SUPPLIER: Sinclair Oil Corporation
P.O. Box 30825
Salt Lake City, Utah 84130

TELEPHONE / FAX: (888) 340-3466 / (801) 524-2740

2. COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENTS:	CAS#	Typical wt.%
Petroleum Distillate Hydrotreated Naphthenic	64742-52-5	>75
Solvent De-waxed Paraffinic Distillate	64742-65	<10
Oils, Lard, Methyl Esters, Sulfurized	Mixture	<5
Sulfur (Elemental Analysis)	7704-34-9	Trace

3. HAZARDS IDENTIFICATION

APPEARANCE: Brown

PHYSICAL STATE: liquid

ODOR: mild sulfurous, fatty petroleum odor

POTENTIAL HEALTH EFFECTS: Practically non-toxic

INHALATION: Low risk of inhalation at ambient temperatures. In enclosed spaces or when hot, vapors may reach concentrations sufficient to cause drowsiness, dizziness, headache, nausea or lung irritation. Misting above TLV may cause chemical pneumonitis.

EYE CONTACT: Mild irritant

SKIN CONTACT: Transient, slight initiation. Avoid prolonged skin contact with used motor oils. Continuous contact with used oil has caused skin cancer in laboratory animals.

INGESTION: Generally low toxicity. If less than one ounce is ingested, material may pass through the system without harm. Very large amounts may cause generalized depression, headache, drowsiness, nausea, vomiting or diarrhea. Small dose may produce irritation and diarrhea.

CHRONIC: Prolonged and/or frequent contact may cause drying, cracking (dermatitis) or folliculitis.

OTHER INFORMATION: Long-term bioassay results indicate that some chlorinated paraffins in combination with corn oil produce tumors in laboratory animals following high-dose forced feeding. It caused the death of off-spring during weaning. The implication of this data for human health effects has not been determined.

CARCINOGENICITY: None known

4. FIRST AID MEASURES

INHALATION: Remove from further exposure. If unconsciousness occurs, seek immediate medical assistance. If breathing stops, use mouth-to-mouth resuscitation.

EYE CONTACT: Flush immediately with water for at least 15 minutes. Seek medical attention promptly.

SKIN CONTACT: Wash contact areas with soap and water. Launder contaminated clothing before reuse.

INGESTION: Not expected to be a problem, however, if greater than ½ liter (pint) ingested, immediately give 1 to 2 glasses of water and call a physician, hospital emergency room or poison control center for assistance. **DO NOT INDUCE VOMITING** or give anything by mouth to an unconscious person.

Notes to Physician: The SUS viscosity at 200F for this product is approximately 750. Following ingestion, at a Saybolt viscosity of 200 at 100°F, the risk of aspiration into the lungs reduces significantly; and is non-significant over 300 SUS. However, for large quantities, lavage may still be advised. Subcutaneous injections require prompt surgical debridement. If not familiar with technique, seek skilled advice.

5. FIRE FIGHTING MEASURES

FLASH POINT: 350°F / 177°C (COC ASTM D-93)

FLAMMABLE LIMITS: Not Determined

AUTOIGNITION TEMPERATURE: Not Determined

FLAMMABILITY CLASSIFICATION: NFPA Flammability =1

GENERAL HAZARD: Non-hazardous

FIRE FIGHTING INSTRUCTIONS: No special instructions

FIRE FIGHTING MEDIA: CO₂, dry chemical, foam, water fog, (water may cause frothing)

HAZARDOUS DECOMPOSITION PRODUCTS: CO₂, (CO under incomplete combustion), traces of oxides of carbon, sulfur, and phosphorous.

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES:

-Remove sources of heat or ignition.

-Provide adequate ventilation .

-Small Spills: Take up with noncombustible absorbent such as fullers earth or sand. Place into containers for later disposal.

-Large Spills: Contain spill in earthen dikes for later recover. Control ignition sources around spill area. Report spills as required to appropriate authorities. Report spill to Coast Guard toll free number (800) 424-8802 for spills that could reach any waterway including intermittent dry creeks. In case of accident or road spill notify Sinclair Oil Corporation at (888) 340-3466

7. HANDLING AND STORAGE

STORAGE: Store below 150°F. Keep container tightly closed and away from heat and flame. Keep separate from strong oxidizing agents.

Caution: Avoid prolonged skin contact with used motor oils. Continuous contact with used oil has caused skin cancer in laboratory animals. After draining oil, wash skin thoroughly with soap and water. Empty containers may contain product residue which could include flammable or explosive vapors. Consult appropriate Federal, State and Local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

HANDLING: Avoid contact with eyes.

MATERIALS MUST BE LABELED AS FOLLOWS: May cause eye irritation. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

8. EXPOSURE CONTROLS, RESPIRATORY & PERSONAL PROTECTION

ENGINEERING CONTROLS: Use in well-ventilated confined spaces, mechanical ventilation may be required to keep levels of certain components below mandated standards. Responsible individuals should evaluate the concentrations of specific regulated chemicals.

PERSONAL PROTECTION:

PROTECTIVE CLOTHING: Wear body-covering work clothes to avoid prolonged or repeated exposure. Launder soiled work clothes before reuse. Safety goggles, or chemical splash goggles if splashing is anticipated. Wear oil impervious gloves if frequent or prolonged contact is expected.

RESPIRATOR: If high vapor concentration is expected, use respirator approved for organic vapors.

OCUPATIONAL EXPOSURE LIMITS

COMPONENT	LIMIT	TWA	STEL	CEILING	NOTATION	OTHER
Oil mist	OSHA PEL	5mg/M ³				
Oil mist	ACGIH TLV	5mg/M ³	10mg/M ³			

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE: Liquid

COLOR: Brown

DENSITY/SPECIFIC GRAVITY (g/ml): 0.877

VAPOR DENSITY (air=1): >2

VAPOR PRESSURE: < 0.01 mmHg (25°C)

BOILING POINT/RANGE: 600°F (316°C) @ 760mm Hg

SOLUBILITY IN WATER: Negligible

VISCOSITY: NA

pH : NA

EVAPORATION RATE (Butyl Acetate=1): <1

10. STABILITY AND REACTIVITY

GENERAL: This product is stable and will not react violently with water

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: Strong oxidants, strong acids

HAZARDOUS DECOMPOSITION: CO₂, (CO under incomplete combustion), traces of oxides of chlorine, sulfur, and phosphorous

11. TOXICOLOGICAL INFORMATION

ORAL TOXICITY (Rats):

Practically non-toxic (LD50:>2000 mg/kg). Based on testing of similar products and/or their components.

DERMAL TOXICITY (RABBITS): Practically non-toxic (LD50:>2000 mg/kg). Based on testing of similar products and/or their components.

INHALATION TOXICITY (RATS): Practically non-toxic. (LD50:>5 mg/l). Based on testing of similar products and/or their components.

EYE IRRITATION (RABBITS): Practically non-irritating (Draize score: >0 but 6or less). Based on testing of similar products and/or their components.

SKIN IRRITATION (RABBITS): Practically non-irritating. (Primary irritation Index: >0.5 but <3). Based on testing of similar products and/or their components.

OTHER ACUTE TOXICITY DATA: The acute toxicological results summarized above are based on testing representative products tested at Mobil Environmental and Health Sciences Laboratory.

This mixture or a similar mixture did not result in any fatalities to rats at concentrations (see inhalation toxicity above) substantially higher than the 5 mg/m³ TLV suggested for oil mists. Inhalation of oil mists may cause respiratory system irritation.

SUBCHRONIC TOXICOLOGY (summary)

Severely solvent refined and severely hydrotreated mineral base oils have been tested at Mobil Environmental and Health Sciences Laboratory by dermal applications to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects. Dermal application to rats of similar products for 13 weeks did not result in any adverse systemic effects.

REPRODUCTIVE TOXICOLOGY (SUMMARY)

Dermal exposure of pregnant rats to representative formulations did not cause adverse effects in either the mothers or their offspring.

CHRONIC TOXICOLOGY (Summary)

The base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of severely treated oils showed no evidence of carcinogenic effects. These results are confirmed on a continuing basis using the Mobil Modified Ames Test.

SENSITIZATION (SUMMARY)

Representative formulations have not caused skin sensitization in guinea pigs.

12. DISPOSAL INFORMATION

WASTE DISPOSAL:

- It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal.
- Check before disposing to be sure you are in compliance with all applicable laws and regulations.
- Treat used oil according to current rules and regulations.
- Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by supervised incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. IN addition, the product is suitable for processing by an approved recycling facility or can be disposed of at any government approved waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal.

Protective Measures During Repair and Maintenance of Contaminated Equipment:

- Refer to Section VII -Special Protection Information
- Wash exposed skin thoroughly with soap and water.
- Use polymer gloves if extended, direct contact is expected.
- Avoid prolonged contact with used oil.

After draining oil, wash skin thoroughly with soap and water. Empty containers may contain product residue, which could include flammable or explosive vapors. Consult appropriate Federal, State and Local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

EPA Hazard Class: NA

Dispose of in accordance with Federal, State, and Local regulations.

13. TRANSPORT INFORMATION

DOT (Department of Transportation):

PROPER SHIPPING NAME: Petroleum Lubrication Oil (Non-regulated)

HAZARD CLASS: Non-Hazardous (Not regulated by US DOT)

IDENTIFICATION NUMBER: None

COMPATIBILITY CATEGORY: Group 33

14. REGULATORY INFORMATION

Fate & Effects: Not Established

REGULATORY INFORMATION:

SARA Title III:
Section 302 Extremely Hazardous Substances: None

Section 311/312 Reportable Hazard Categories: THIS PRODUCT CONTAINS NO "EXTREMELY HAZARDOUS SUBSTANCES" of Section 302 (a)

SECTION 313 Toxic Chemicals: This product contains no chemicals reportable under SARA (313) toxic release program.

COMPREHENSIVE ENVIRONMENTAL, RESPONSE, COMPENSATION & LIABILITY ACT (CERCLA) REPORTABLE QUANTITY Section 102 Hazardous Substances: Petroleum and petroleum fractions are excluded from the list of CERCLA hazardous substances by Section 101 (4) of CERCLA. **TSCA INVENTORY STATUS:** Chemical Components listed on TSCA inventory.

US OSHA HAZARD COMMUNICATION STANDARD: Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined to be hazardous.

CLEAN WATER ACT: Under Section 311(b) (4) of the Clean Water Act, discharges of crude oil and petroleum products in any kind or form to surface waters must be immediately reported to the National Response Center: 800-424-8802.

15. OTHER INFORMATION

NFPA 704/HMIS:

Health – 2 Flammability – 1 Reactivity – 0
(0 = insignificant, 1 = slight, 2 = moderate, 3 = high, 4 = extreme)

REVISION SUMMARY:

Complete review of MSDS, December 2005.

THIS PRODUCT MATERIAL SAFETY DATA SHEET PROVIDES HEALTH AND SAFETY INFORMATION. THE PRODUCT SHOULD BE USED IN APPLICATIONS CONSISTENT WITH THIS PRODUCT LITERATURE. FOR ANY OTHER USES, EXPOSURES SHOULD BE EVALUATED SO THAT APPROPRIATE HANDLING PRACTICES AND TRAINING PROGRAMS CAN BE ESTABLISHED TO ENSURE SAFE WORKPLACE OPERATIONS.

THIS MATERIAL SAFETY DATA SHEET IS PROVIDED IN GOOD FAITH AND MEETS THE REQUIREMENTS OF THE HAZARDOUS COMMUNICATION PROVISIONS OF SARA TITLE III AND 29CFR1910.1200(g) OF THE OSHA REGULATIONS. THE ABOVE INFORMATION IS BASED ON REVIEW OF AVAILABLE INFORMATION SINCLAIR BELIEVES IS RELIABLE AND IS SUPPLIED FOR INFORMATIONAL PURPOSES ONLY. SINCLAIR DOES NOT GUARANTEE ITS COMPLETENESS OR ACCURACY. SINCE CONDITIONS OF USE ARE OUTSIDE THE CONTROL OF SINCLAIR, SINCLAIR DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, AND ANY LIABILITY FOR DAMAGE OR INJURY WHICH RESULTS FROM THE USE OF THE ABOVE DATA. NOTHING HEREIN IS INTENDED TO PERMIT INFRINGEMENT OF VALID PATENTS AND LICENSES.

DATE: December 2005