

1601 McCloskey Blvd  
Tampa, Florida 33605 U.S.A.  
E-MAIL: [davidb@enginearmour.com](mailto:davidb@enginearmour.com)

ENGINE ARMOUR  
THE BEST FOR LESS

Telephone: (800) 959-8219 FAX: (813) 254-0950

## MATERIAL SAFETY DATA SHEETS

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

GENERIC NAME: Fuel Injector Cleaner

ISSUE DATE: FEB 2006

#### TRADE NAMES:

1. Engine Armour® Fuel Injector Treatment / Upper Cylinder Lubricant

CAS NUMBER:

Mixture

SYNONYMS / GENERAL NAMES:

None

24 HOUR EMERGENCY TELEPHONE:

(CHEMTREC) 1-800-424-9300

TECHNICAL INFORMATION:

813-248-1988

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	%	HAZARD DATA
Petroleum Oils	64742-55-8	> 96	Skin (rabbit) LD50: > 2000 mg/kg
Petroleum Base Additive See section 15	Mixture	< 3.5	

### 3. HAZARDOUS IDENTIFICATION

ROUTES OF ENTRY:	Inhalation. Skin.
PRECAUTIONARY MEASURES:	Keep away from heat, sparks, and flame. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Avoid contact with eyes, shin, and clothing.
MUTAGENICITY:	No data available to indicate either product or components present at greater than 0.1% are mutagenic or genotoxic.
REPRODUCTIVE EFFECTS:	No data available to indicate either product or components present at greater than 0.1% that may cause reproductive toxicity.

### 4. FIRST AID MEASURES

EYES:	Flush with water for at least 15 minutes. If irritation persists, obtain medical assistance.
DERMAL:	Wash with soap and water until no odor remains. If redness or swelling develops, obtain medical assistance. Wash clothing before use.
INGESTION:	Do not induce vomiting! Do not give liquids! Obtain emergency medical attention. Small amounts which accidentally enter mouth should be rinsed out until taste of it is gone.
INHALATION:	Move person to fresh air. If not breathing, give artificial respiration. Obtain medical assistance.
ADDITIONAL:	Note to physician: Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

FLASH POINT, °C (°F): 220°C (428°F)  
FLAMMABLE LIMITS (% BY VOLUME): LOWER: ND UPPER: ND  
EXTINGUISHING MEDIA: Water spray. Regular foam. Dry chemical. Carbon dioxide.  
SPECIAL FIRE FIGHTING PROCEDURES: Recommend wearing self-contained breathing apparatus. Water may cause splattering. Materials will float on water.  
AUTOIGNITION TEMPERATURE: ND  
EXPLOSION DATA: Material does not have explosive properties.  
NFPA RATING: HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0

NA - NOT APPLICABLE

ND - NO DATA

NE - NOT ESTABLISHED

**6. ACCIDENTAL RELEASE MEASURES**

**SPILL PROCEDURES:** Remove all ignition sources. Stop leak if you can do it without risk. Ventilate area of leak and avoid breathing vapor or mist. Contain away from surface waters and sewers. Contain as a liquid for possible recovery or sorb with compatible sorbent material and shovel into collapsible container for disposal.

**7. HANDLING AND STORAGE**

**HANDLING PROCEDURES:** Keep away from intense heat, sparks, or flame. Empty containers may contain product residue which could include flammable or explosive vapors.

**STORAGE PROCEDURES:** Do not apply heat or flame to container. Keep separate from strong oxidizing agents.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

<b>ENGINEERING CONTROLS:</b>	Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits.
<b>GLOVES PROTECTION:</b>	Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls to prevent skin contact.
<b>EYE PROTECTION:</b>	Use chemical safety goggles and/ or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facility
<b>RESPIRATORY PROTECTION:</b>	Normally none required. If high vapor or mist concentrations expected - use respirator approved for organic vapors and mists.
<b>CLOTHING RECOMMENDATION:</b>	Wear appropriate chemical-resistant apron or other protective clothing.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE:</b>	Dark Colored Liquid
<b>ODOR:</b>	Mild
<b>pH:</b>	ND
<b>VAPOR PRESSURE, mm Hg (25 °C):</b>	< 0.08
<b>VAPOR DENSITY:</b>	10+ (air=1)
<b>MELTING POINT:</b>	ND
<b>BOILING POINT, 760 mm Hg, °C:</b>	ND
<b>SOLUBILITY IN WATER:</b>	Insoluble
<b>SPECIFIC GRAVITY:</b>	.85 at 15.6 °C
<b>EVAPORATION RATE:</b>	N/A
<b>VISCOSITY 40°C (100°C)</b>	N/E
<b>MOLECULAR WEIGHT:</b>	ND
<b>PERCENT VOLATILE:</b>	NEGLIGIBLE VOLATILITY

**10. STABILITY AND REACTIVITY**

<b>STABILITY:</b>	Stable under ordinary conditions of use and storage. Heat and sunlight can contribute to instability.
<b>DECOMPOSITION PRODUCTS:</b>	Toxic gases and vapors such as carbon monoxide may be release in a fire.
<b>POLYMERIZATION:</b>	Will not occur
<b>INCOMPATIBILITY:</b>	Strong oxidizing agents.

**11. TOXICOLOGICAL INFORMATION**

<b>EYE IRRITATION:</b>	Moderate to strong eye irritation. Based on data from components or similar materials.
<b>DERMAL IRRITATION:</b>	Skin irritant. Based on data from components or similar materials. Prolonged or repeated skin contact as from wet clothing with material may cause dermatitis. Symptoms may include redness, itching, defatting and cracking of the skin.
<b>INHALATION TOXICITY:</b>	High concentrations may cause headaches, dizziness, nausea, behavioral changes, weakness, drowsiness and stupor.
<b>INJECTION SENSITATION:</b>	No data available to indicate product or components may be respiratory sensitizers.
<b>CHRONIC EXPOSURE SYMPTOMS:</b>	Repeated overexposure to petroleum naphtha can cause nervous system damage. A 14-day dermal toxicity study of 2-ethlehexanol in rats showed blood effects, decreased spleen weight and decreased triglycerides. Repeated ingestion of 2-ethlehexanol may cause injury to the liver and kidneys.

NA - NOT APPLICABLE

ND - NO DATA

NE - NOT ESTABLISHED

**12. HEALTH INFORMATION**HMIS CODE: HEALTH: 2 FIRE: 1 REACTIVITY: 0

PRECAUTIONARY LABELS: Harmful if inhaled, Causes eye irritation, Causes skin irritation, Harmful if absorbed through skin, Combustible Liquid, May cause allergic skin reaction, May cause chronic health effects.

**13. DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL: Material, if discarded, is expected to be a hazardous waste under RCRA due to toxicity. Waste management should be in compliance with federal, state, and local laws. Determine compliance status with all applicable requirements prior to disposal.

**14. TRANSPORT INFORMATION****DOT (DEPARTMENT OF TRANSPORTATION)**

PROPER SHIPPING NAME	Petroleum Oils
HAZARD CLASS:	Not a DOT controlled material
IDENTIFICATION NUMBER:	NE

**15. REGULATORY INFORMATION****SARA SECTION 313 - TOXIC CHEMICALS:**

This product does contain toxic chemicals under SARA Section 313 and 40 CFR Part 372.

COMPONENTS	CAS NO.	%
Petroleum Naphthia	64742-94-5	<3
Naphthalene	91-20-3	<3

**SARA SECTION 311 - HAZARD CATEGORIES:**

This product may meet one or more of the criteria for the hazard categories defined in 40 CFR Part 370 as established by Sections 311 and 312 of SARA as indicated below:

Hydrocarbon solvent  
Hydrocarbyl anime  
Polyether amine

Yes	IMMEDIATE (ACUTE) HEALTH HAZARD	No	SUDDEN RELEASE OF PRESSURE HAZARD
Yes	DELAYED (CHRONIC) HEALTH HAZARD	No	REACTIVE HAZARD
Yes	FIRE HAZARD		

**SARA SECTION 302 - EXTREMELY HAZARDOUS WASTE:**

This product is not known to contain any components in concentrations greater than one percent that are listed as Extremely Hazardous Substances in 40 CFR Part 355 pursuant to the requirements of Section 302(a) of SARA.

**CLEAN WATER ACT (CWA):**

Under the CWA, discharges of crude oil and petroleum products to surface water without proper Federal and State permits must be reported immediately to the National Response Center at (800) 424-8802.

**CERCLA HAZARDOUS SUBSTANCES:**

As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance.

**U.S. TSCA INVENTORY**

All components of this material are on the U.S. TSCA Inventory or are not required to be listed on the U.S. TSCA Inventory

**16. OTHER INFORMATION**

THE INFORMATION IN THIS MATERIAL SAFETY DATA SHEET SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ENGINE ARMOUR BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION, BUT MAKES NO WARRANTY THAT IT IS.

NFPA HAZARD RATING	least - 0	slight - 1	moderate - 2	high - 3	extreme - 4
HMIS HEALTH RATING	least - 0	slight - 1	moderate - 2	high - 3	extreme - 4

NA - NOT APPLICABLE

ND - NO DATA

NE - NOT ESTABLISHED