

# Engine Armour

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## MATERIAL SAFETY DATA SHEET

### A PRODUCT INFORMATION

**PRODUCT NAME**

Universal Lith. EP # 2 Grease

**PRODUCT CATEGORY**

Petroleum Lubricating Grease

**PRODUCT APPEARANCE :** Red

**ODOR:** Mild, bland odor

**TRANSPORTATION EMERGENCY TELEPHONE NUMBER**

(CHEMTREC) 1-800-424-9300

**FOR PRODUCT INFORMATION AND TECHNICAL ASSISTANCE CALL:**

(ENGINE ARMOUR) 1-800-388-1264

### B. COMPONENTS AND HAZARD INFORMATION

COMPONENT	CAS #	%	HAZARD DATA
Petroleum Oil	64742-53-5		Oral
SOAP & PROPRIETARY INGREDIANTS:	MIXTURE	<20	EYE & SKIN IRRITANT IRRITANT

### C PHYSICAL / CHEMICAL CHARACTERISTICS

**BOILING POINT:** F APPROX: 750 **VAPOR PRESSURE:** N/D  
**VAPOR DENSITY:** (AIR=1) **SPECIFIC GRAVITY:** 0.89  
**MELTING POINT:** F N/D  
**SOLUBILITY IN WATER:** Slight **EVAPORATION RATE:** (EE=1) **ODOR:** Slight  
**APPEARANCE:** Red Semi-solid

### D FIRE AND EXPLOSION DATA

**FLASH POINT:** F COC 470 (Mineral Oil)  
**FLAMMABLE LIMITS:** Lower N/D Upper N/D  
**EXTINGUISHING MEDIA:** CO<sub>2</sub>, Dry Chemical, Foam, and Water fog.

**SPECIAL FIREFIGHTING PROCEDURES:** None

**UNUSUAL FIRE and EXPLOSION HAZARDS:** None

**E REACTIVITY DATA**

STABILITY: Stable

CONDITIONS / MATERIALS TO AVOID: Strong oxidants / acids, Extreme heat.

CONDITIONS CONTRIBUTING to HAZARDOUS POLYMERIZATION: None

All components of this product are listed on the U.S. TSCA inventory.

See Section E for Health and Hazard Information.

See Section H for additional Environmental Information.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Health	Flammability	Reactivity
1	1	0

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

EXPOSURE LIMIT FOR TOTAL PRODUCT

5 mg/m<sup>3</sup> for oil mist (aerosol) for 8-hour workday

BASIS

OSHA Regulation 29 CFR 1910.1000 and recommended by the American Conference of Governmental Industrial Hygienists (ACGIH). ACGIH states that the air is to be sampled by a method that does not collect vapor; in addition, it lists a 10 mg/m<sup>3</sup> STEL.

**F PRIMARY ROUTES OF ENTRY**

AND EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT

If lubricant gets into the eyes, flush with clear water for 15 minutes or until irritation subsides. If irritation persists, call a physician.

SKIN

In case of skin contact, remove any contaminated clothing and wash skin with soap and water. Launder or dry-clean clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high-pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

**G INHALATION**

Vapor pressure is very low. Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor from hot product, immediately remove from exposure and call a physician. If breathing

is irregular or has stopped, start resuscitation; administer oxygen, if available. If overexposed to oil mist, remove from further exposure until excessive oil mist condition subsides.

#### INGESTION

If ingested, DO NOT induce vomiting; call a physician immediately.

H	FIRE AND EXPLOSION HAZARD INFORMATION
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#### FLASH POINT (MINIMUM)

221 ~ C (430 ~F)

ASTM D 92, Cleveland Open Cup

#### AUTOIGNITION TEMPERATURE

Greater than 260~C (500~F)

#### NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) – HAZARD IDENTIFICATION

Health Flammability Reactivity

1 1 0

NFPA HAZARD RATING: least – 0 slight – 1 moderate – 2 high – 3 extreme - 4

#### HANDLING PRECAUTIONS

Use product with caution around heat, sparks, pilot lights, static electricity, and open flame.

#### FLAMMABLE OR EXPLOSIVE LIMITS (APPROXIMATE PERCENT BY VOLUME IN AIR)

Estimated values: Not available

#### EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES

Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing 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.

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.

#### DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Carbon monoxide and carbon dioxide from burning. Oxides of sulfur, sulfur dioxide or hydrogen sulfide, depending upon decomposition conditions, oxides of calcium.

#### “EMPTY” CONTAINER WARNING

“Empty” containers retain residue (liquid and/or vapor) 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.

I	HEALTH AND HAZARD INFORMATION
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#### EFFECTS OF OVEREXPOSURE (Signs and symptoms of exposure)

None when used with good personal hygiene practices. May otherwise cause skin and eye irritation upon prolonged or repeated contact.

Acute toxicological properties: No data available.  
NATURE OF HAZARD AND TOXICITY INFORMATION

Repeated and prolonged overexposure to oil mists may result in droplet deposition, oil granule formation, inflammation and increased incidence of infection.

In accordance with the current OSHA Hazard Communication Standard criteria, this product does not require a cancer hazard warning. This is because the product is formulated from base stocks which are severely hydrotreated, severely solvent extracted, and/or processed by mild hydrotreatment and extraction. Alternatively, it may consist of components not otherwise affected by IARC criteria, such as atmospheric distillates or synthetically derived materials, and as such is not characterized by current IARC classification criteria.

Prolonged or repeated skin contact with this product tends to remove skin oils, possibly leading to irritation and dermatitis; however, based on human experience and available toxicological data, this product is judged to be neither a "corrosive" nor an "irritant" by OSHA criteria.

Product contacting the eyes may cause eye irritation.

Product has a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary 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.

J	PHYSICAL DATA
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The following data are approximate or typical values and should not be used for precise design purposes.

BOILING RANGE IBP Approximately 310~C (590~F)	VAPOR PRESSURE Less than 0.01 mm Hg @ 20~C
SPECIFIC GRAVITY (15.6~C) .96	VAPOR DENSITY (AIR = 1) Greater than 5
MOLECULAR WEIGHT Not determined	PERCENT VOLATILE BY VOLUME Negligible from open container in 4 hours @ 38~C (100~F)
pH Essentially neutral	EVAPORATION RATE @ 1 ATM. AND 25~C (77~F) (n-BUTYL ACETATE = 1 Less than 0.01
POUR, CONGEALING OR MELTING POINT 260~C plus (500~F plus) Dropping Point by ASTM D 2265	SOLUBILITY IN WATER @ 1 ATM AND 25~C (77~F) Negligible; less than 0.1%
VISCOSITY 285 Worked penetration, mm/10, @ 25~C, ASTM D 217	

K	REACTIVITY
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This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidants such as liquid chlorine, concentrated oxygen, sodium hypochlorite, calcium hypochlorite, etc., as this presents a serious explosion hazard.

L ENVIRONMENTAL INFORMATION
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**CLEAN WATER ACT / OIL POLLUTION ACT**

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 waters that cause a sheen must be reported to the National Response Center (1-800-424-8802).

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Recover free product. Add sand, earth, or other suitable absorbent to spill area. Minimize skin contact. 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.

Assure conformity with applicable governmental regulations.

THE FOLLOWING INFORMATION MAY BE USEFUL IN COMPLYING WITH VARIOUS STATE AND FEDERAL LAWS AND REGULATIONS UNDER VARIOUS ENVIRONMENTAL STATUTES:

**THRESHOLD PLANNING QUANTITY (TPQ), EPA REGULATION 40 CFR 355 (SARA Sections 301-304)**

No TPQ for product or any constituent greater than 1% or 0.1% (carcinogen).

**TOXIC CHEMICAL RELEASE REPORTING, EPA REGULATION 40 CFR 372 (SARA Section 313)**

This product does not contain any chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

**HAZARDOUS CHEMICAL REPORTING, EPA REGULATION 40 CFR 370 (SARA Sections 311-312)**

EPA Hazard Classification Code: Not Applicable

M PROTECTION AND PRECAUTIONS
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**VENTILATION**

Use local exhaust to capture vapor, mists or fumes, if necessary. Provide ventilation sufficient to prevent exceeding recommended exposure limit or buildup of explosive concentrations of vapor in air.

**RESPIRATORY PROTECTION**

Use supplied-air respiratory protection in confined or enclosed spaces, if needed.

**PROTECTIVE GLOVES**

Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

**EYE PROTECTION**

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

**OTHER PROTECTIVE EQUIPMENT**

Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing, which could result in prolonged or repeated skin contact.

**WORK PRACTICES**

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

In order to prevent fire or explosion hazards, use appropriate equipment.

#### PERSONAL HYGIENE

Minimize breathing vapor, mist or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before re-use. Remove contaminated shoes and thoroughly clean before re-use; discard if oil-soaked. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water.

N	TRANSPORTATION INFORMATION
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#### TRANSPORTATION INCIDENT INFORMATION

For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation Emergency Response Guidebook for Hazardous Materials Incidents.

#### U.S. DOT HAZARDOUS MATERIALS SHIPPING DESCRIPTION

Not regulated

#### U.S. DOT PROPER SHIPPING NAME

Not regulated

O	OTHER INFORMATION
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The information in this Material Safety Data Sheet should be provided to all that 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.

The information and recommendations contained herein are, to the best of ENGINE ARMOUR knowledge and belief, accurate and reliable as of the date issued. Engine Armour does not warrant or guarantee their accuracy or reliability, and XCEL Oil Company shall not be liable for any loss or damage arising out of the use thereof. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.

The Environmental Information included under section H hereof as well as the Hazardous Materials Identification system (HMIS) and National Fire Protection Association (NFPA) ratings have been included by XCEL Oil Company in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with XCEL Oil Company's interpretation of the available data.

END OF DOCUMENT

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