

MATERIAL SAFETY DATA SHEET

I PRODUCT INFORMATION #903

PRODUCT NAME: Multi Purpose Lithium # 2 Grease

Transportation Emergency Telephone Number: (CHEMTREC) 1-800-424-9300

For Product Information and Technical Information:
ENGINE ARMOUR 1-800-388-1264

II COMPONENT IDENTITY / INGREDIENT INFORMATION

Components	CAS No. of Components	Aprx. Concentration
Grease Mixture Plus Additives	Complex Mixture	100%

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

III PHYSICAL / CHEMICAL CHARACTERISTICS

BOILING POINT, F: N/D	Specific Gravity: 0.91-0.93
VAPOR DENSITY (Air=1) >1	Evaporation Rate (EE=1) <1
MELTING POINT, F N/D	ODOR: Bland Oil Odor
SOLUBILITY in WATER: NEG	
APPEARANCE: Maroon in color	

IV FIRE and EXPLOSION

HMIS Rating Least - 0 slight - 1 moderate - 2 high - 3 extreme - 4

NFPA IDENTIFICATION: HEALTH =1 FLAMMABILITY=1 REACTIVITY=0

FLASH POINT, F NO DATA
FLAMMABLE LIMITS: NO DATA
EXTINGUISHING MEDIA: CO₂, dry chemical, water fog, foam
SPECIAL FIRE FIGHTING PROCEDURES: Avoid Inhalation of vapors
UNUSUAL FIRE AND EXPLOSION HAZARDS: None

V REACTIVITY DATA

STABILITY: Stable
CONDITIONS/MATERIALS to avoid: Strong oxidants, strong acids
HAZARDOUS DECOMPOSITION/BY- PRODUCTS: CO CO₂
CONDITIONS CONTRIBUTING to HARARDOUS POLYMERIZATION: None

VI SPILL or LEAK PROCEDURE

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.

VII SPECIAL PROTECTION INFORMATION

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.

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.

VIII FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT (MINIMUM)

COC 470 (mineral oil)

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 reconditioned. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

E. HEALTH AND HAZARD INFORMATION

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 granuloma 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.

F. ENVIRONMENTAL INFORMATION

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 area. 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

G PROTECTION AND PRECAUTIONS

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.

H TRANSPORTATION INFORMATION

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

I OTHER INFORMATION

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'S 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.

NFPA HAZARD RATING	Least=0	Slight=1	Moderate=2	High=3	Severe=4
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HMIS HEALTH RATING	Least=0	Slight=1	Moderate=2	High=3	Severe=4
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N/A = NOT APPLICABLE

N/D=NO DATA

NE=NOT ESTABLISHED

END OF DOCUMENT

REVISION 4/13/01