

SAFETY DATA SHEET



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Enhance™ Multi-Purpose EP Lithium Grease 2

PRODUCT USE: Lubricating Grease

COMPANY IDENTIFICATION: Enhance™ Lubricants, LLC
1959 Bluff Road
Columbia, SC 29201
www.enhanceoil.com

TRANSPORTATION EMERGENCY RESPONSE: PERS – 800-633-8253

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION:

Skin corrosion- Category 2

Serious eye damage/eye irritation- Category 2

SIGNAL WORD: Warning



HAZARD STATEMENTS: Causes skin irritation; Causes serious eye irritation

PRECAUTIONARY STATEMENTS – GENERAL: Read label before use. If medical advice is needed, have product container or label at hand. Keep out of reach of children.

PRECAUTIONARY STATEMENTS – PREVENTION: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Wash face, hands and any exposed skin thoroughly after handling.

PRECAUTIONARY STATEMENTS – RESPONSE: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. If on skin: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical attention.

PRECAUTIONARY STATEMENTS – DISPOSAL: Dispose of contents/container to disposal recycling center. Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

HAZARDS NOT OTHERWISE CLASSIFIED: Unknown acute toxicity: 2.27% of the mixture consists of ingredient(s) of unknown toxicity.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Severely hydrotreated heavy naphthenic petroleum oil	64742-52-5	70% - 80%
Residual oils (petroleum), hydrotreated	64742-57-0	1% - 10%
Zinc Alkyl Dithiophosphate	68649-42-3	<5%
Lithium hydroxide solution	1310-66-3	<5%

Petroleum asphalt	8052-42-4	<1%
**If chemical name/CAS No is proprietary and/or weight % is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade		

SECTION 4: FIRST AID MEASURES

EYES: Check for and remove contact lenses. Flush eyes with large amounts of water for at least 15 minutes until irritation subsides. If irritation persists, get medical attention.

SKIN: If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Clean or discard contaminated leather goods. If material is injected under skin, seek medical attention immediately.

INGESTION: If swallowed, do not induce vomiting unless directed to by a physician. Rinse out mouth with water. Never give anything by mouth to a person who is not fully conscious. Allow small quantities to pass through the digestive system. If large amounts are swallowed or irritation of discomfort, seek medical attention immediately.

INHALATION: Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air.

MOST IMPORTANT SYMPTOMS AND EFFECTS:

SYMPTOMS: May be harmful if swallowed. Causes skin irritation. Causes serious eye irritation.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED:

Note to Physicians:

Skin: In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.

Ingestion: Check for possible bowel obstruction with ingestion of large quantities of material.

SECTION 5: FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide water spray.

UNSUITABLE EXTINGUISHING MEDIA: Not determined

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Water or foam may cause frothing. Molten material can form flaming droplets if ignited. Use of water on product above 100°C (212°F) can cause product to expand with explosive force.

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, phosphorus, zinc and or nitrogen.

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS: As with any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces. Fight the fire from a safe distance in a protected location. Open any masses with a water stream to prevent ignition due to smoldering. Cool surface with water fog. Do not allow liquid runoff to enter sewers or public waters.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: Take proper precautions to ensure your own health and safety before attempting spill control or clean up. For more specific information, refer to section 8. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Slipping hazard; do not walk through spilled material.

METHODS FOR CONTAINMENT: Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewer, basements or confined spaces.

METHODS FOR CLEAN UP: For small spills, absorb or cover with dry earth, sand or other inert non-combustible absorbent material and place into waste containers for lateral disposal. Contain large spills to maximize product recovery or disposal. In urban areas, clean up spill as soon as possible. In natural environments, seek clean up advice from specialists to minimize physical habitat damage.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: If this product is stored or applied in high-pressure systems such as grease guns or hydraulic lines, there is the potential for accidental injection into skin and underlying tissues. Empty containers may contain product residue that can ignite with explosive force. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

VENTILATION REQUIREMENTS: Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

STORAGE CONDITIONS: Keep containers tightly closed in a dry, cool and well-ventilated place.

INCOMPATIBLE MATERIALS: Strong oxidizing agents.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Severely hydrotreated heavy naphthenic petroleum oil 64742-52-5	TWA: 5 mg/m ³ (oil mist) STEL: 10 mg/m ³ (oil mist)	TWA: 5 mg/m ³ (oil mist) STEL: none established	TWA: none established STEL: none established
Petroleum asphalt	TWA: 0.5 mg/m ³ benzene soluble aerosol fume, inhalable fraction		Ceiling: 5mg/m ³ fume 15 min

ENGINEERING CONTROLS: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work station location.

EYE/FACE PROTECTION: Wear safety glasses with side shields (or goggles)

RESPIRATORY PROTECTION: Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment.

SKIN/BODY PROTECTION: Chemical resistant, impermeable gloves. Long sleeve shirt and long pants. Aprons. Wear a lab coat.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Dark amber

Physical State: Semi-solid to solid

Odor: Mild petroleum

Odor Threshold: No data available

pH: No data available

Vapor Pressure: <0.001 Kpa (<0.01 MM Hg)(at 20°C)

Vapor Density (Air = 1): >10

Boiling Point/Boiling Range: No data available

Solubility: Negligible solubility in cold water

Freezing Point: No data available

Melting Point: No data available

Pour Pont Temperature: No data available

Specific Gravity: <1

Evaporation Rate: No data available

Decomposition Temperature: No data available

Partition Coefficient: No data available

Flash Point: 238°C (406°F) Open cup

Flammability (Solid, Gas): No data available

Upper Flammability Limits: No data available

Lower Flammability Limits: No data available

Auto-Ignition Temperature: No data available

Kinematic Viscosity: 187 cSt @ 40°C (104°F)

Dynamic Viscosity: No data available

Explosive Properties: No data available

Oxidizing Properties: No data available

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: Not reactive under normal conditions.

CHEMICAL STABILITY: Stable under recommended storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS: None under normal processing.

HAZARDOUS POLYMERIZATION: Under normal conditions of storage and use, hazardous polymerization will not occur.

CONDITIONS TO AVOID: Keep away from extreme heat, sparks, open flame and incompatible materials.

INCOMPATIBLE MATERIALS: Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, phosphorus, zinc and or nitrogen.

SECTION 11: TOXICOLOGICAL INFORMATION

INFORMATION OF LIKELY ROUTES OF EXPOSURE:

EYE CONTACT: Causes serious eye irritation

SKIN CONTACT: Causes skin irritation

INHALATION: Do not inhale

INGESTION: May be harmful if swallowed

Chemical Name	Oral LD50	Dermal LD50	Inhalation-LD50
Hydrotreated castor oil – (flake or solid) 8001-78-3	>10 g/kg (Rat)	-	.
Lithium hydroxide solution 1310-66-3	=120 mg/kg (Rat)	-	=0.96 mg/L (Rat) 4h
Petroleum asphalt	>5000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	-

INFORMATION ON PHYSICAL, CHEMICAL AND TOXICOLOGICAL EFFECTS:

SYMPTOMS: See Section 4

DELAYED AND IMMEDIATE EFFECTS AS WELL AS CHRONIC EFFECTS FROM SHORT AND LONG-TERM EXPOSURE:

CARCINOGENICITY: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

NUMERICAL MEASURES OF TOXICITY: Not determined

UNKNOWN ACUTE TOXICITY: 2.25% of the mixture consists of ingredient(s) of unknown toxicity

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

COMPONENT INFORMATION:

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Severely hydrotreated heavy naphthenic petroleum oil 64742-52-5		5000: 96h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/L EC50
Hydrotreated castor oil – (flake or solid) 8001-78-3		10000: 96 h Brachydanio rerio mg/L LC50		
Zinc alkyl dithiophosphate 68649-42-3		1.0-5.0: 96h Pimepphales promelas mg/L LC50 static 10.0-35.0: 96 h Pimepphales promelas mg/L LC50 semi-static		1-1.5: 48h Daphnia magna mg/L EC50

MOBILITY:

Chemical Name	Partition Coefficient
Petroleum Asphalt 8052-42-4	>6

BIOACCUMULATION: Not determined

TOXICITY: No data available

PERSISTENCE/DEGRADABILITY: No data available

OTHER ADVERSE EFFECTS: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL OF WASTES: Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

CONTAMINATED PACKAGING: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT: Not regulated

IMO/IMDG: Not regulated

ICAO/IATA: Not regulated

SECTION 15: REGULATORY INFORMATION**INTERNATIONAL INVENTORIES:**

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Severely hydrotreated heavy naphthenic petroleum oil	Present	X		Present		Present	X	Present	X	X
Residual oils (petroleum), solvent refined	Present	X		Present		Present	X	Present	X	X
Zinc alkyl dithiophosphate	Present	X		Present			X	Present	X	X
Lithium Hydroxide Solution						Present	X		X	X
Petroleum asphalt	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US FEDERAL REGULATIONS:

CERCLA- This material, as supplied does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Chemical Name	CAS NUMBER	Weight %	SARA 313 - Threshold Values %
Zinc alkyl dithiophosphate	68649-42-3	<5	1.0

CWA (Clean Water Act)

Chemical Name	CWA – Reportable Quantities	CWA – Toxic Pollutants	CWA – Priority Pollutants	CWA – Hazardous Substances
Zinc alkyl dithiophosphate		X		

SECTION 16: OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 1 Reactivity: 0 Special Hazards: NA

HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0 Personal Protection: NA

DISCLAIMER

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose

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