

Safety Data Sheet

SDS No. 12018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

DURALIFE® LITHIUM 12 HYDROXY STEARATE GREASES – ALL GRADES

Product Use : Lubricating Grease

Manufacturer :

AMTECOL, Inc.

810 Wright Ave, Richmond, CA 94804, U.S.A.

www.amtecol.com

Transportation Emergency & Emergency spill information :

Call CHEMTREC : (+1) 703-527-3887 (outside the U.S.), 1-800-424-9300 (in the U.S.)

Health Emergency : Amtecol Emergency Information Center : 1-866-268-1888

Other Product Information :

Technical Assistance/SDS info & Customer Service : 1-510-235-7979 Email :

info@amtecol.com

SECTION 2. HAZARDS IDENTIFICATION

Classified Hazards

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200 (2012)

Label Elements

No classified hazards

SECTION 3. COMPOSITION INFORMATION/ INGREDIENTS

| COMPONENTS | CAS NUMBER | % WEIGHT |
|-----------------------------|--|----------|
| LUBRICATING BASE OILS | 64741-96-4, 64742-52-5, 64742-65-0, 64742-53-6, 64742-62-7, 64742-88-4, 64742-01-4 | > 98 |
| BORON LITHIUM OXIDE | 12007-60-2 | < 4 |
| ZINC DIALKYLDITHIOPHOSPHATE | 68649-42-3 | < 2 |

The specific chemical names and composition of the components not disclosed is confidential business information and is withheld as permitted by 29CFR 1910.1200 and various state Right-to-Know laws.

SECTION 4. FIRST AID MEASURES

Eye Contact : Flush eyes with running water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15

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minutes. Get immediate medical attention.

Skin Contact : No specific first aid measures are required. In case of contact , no treatment is necessary under ordinary circumstances. Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately .

Inhalation(Breathing) : Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

Ingestion(Swallowing) : First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Most important symptoms and effects:

Acute: None known or anticipated

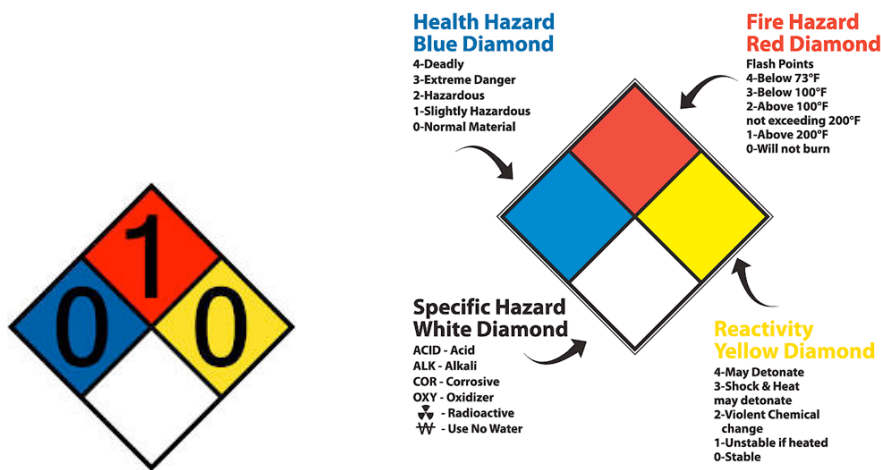
Delayed: None known or anticipated. See Section 11 for information on effects from chronic exposure, if any.

Notes to Physician: When using high-pressure equipment, injection of product under the skin can occur. In this case, the casualty should be sent immediately to hospital. Do not wait for symptoms to develop. High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. These injuries often require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury. Early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing Media : Use dry chemical, foam, water fog or carbon dioxide CO2 to extinguish flames.

NFPA 704 HAZARD RATINGS:



Protection of Fire Fighters:

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Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Use water spray to cool fire exposed surfaces and to protect personnel.

Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Accidental Release Measures : Stop the source of the leak or release. Clean up releases as soon as possible, observing precautions in Exposure Controls/Personal Protection. Contain liquid to prevent further contamination of soil, surface water or ground-water. Clean up small spills using appropriate techniques such as sorbent materials or pumping. Where feasible and appropriate, remove contaminated soil.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

Personal Precautions: Wear appropriate personal protective equipment when cleaning up spills.

Reporting: Follow prescribed procedures for reporting and responding to larger releases. Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7. HANDLING AND STORAGE

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Keep out of the reach of children. Wash thoroughly after handling and before eating, smoking or using toilet facilities. Do not swallow or inhale vapors. Do not eat, drink or smoke in work areas.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Conditions for safe storage: Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material. Protect container(s) against physical damage.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force.

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"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

General considerations:

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Occupational Exposure Limits:

| Component | ACGIH | OSHA | Other |
|----------------------|---|---|-------|
| Lubricating Base Oil | TWA: 5mg/m ³ STEL: 10 mg/m ³ as Oil Mist, if Generated | TWA: 5mg/m ³ as Oil Mist, if Generated | |
| Boron Lithium Oxide | STEL : 6 mg/m ³ inhalable fraction TWA : 2 mg/m ³ inhalable fraction | | |

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Eye Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin /Hand/Body Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

Respiratory Protection: No respiratory protection is normally required. If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a

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particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--|
| Appearance : Red | Relative Density@@ 15 .6°C : 0.87 kg/l |
| Odor : Petroleum odor | Flash Point : 495 °F (257 °C) |
| Physical State : Semi-Solid | Viscosity of oil use : N/A |
| Evaporation Rate (nBuAc=1) : N/A | Vapor Pressure :< 0.01 mmHg |
| Boiling Point : N/A | Vapor Density (air=1) : > 5 |
| Melting Point : Not Applicable(N/A) | pH : Not Applicable |
| Specific Gravity : < 1 | Decomposition temperature : No Data Available |
| Flammability (solid, gas) : N/A | Auto-ignition Temperature : No data |
| Decomposition Temperature : No data | Solubility in water : Negligible |
| Octanol/Water Partition Coefficient : No data available | Flammability (Explosive) Limits (% by volume in air) : Lower: Not Applicable Upper: Not Applicable |

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures

Conditions to Avoid: Excessive heat and sources of ignition.

Materials to Avoid: Strong oxidizing agents, heat, open flame.

Hazardous Decomposition Products: Does not decompose at ambient temperatures.

Hazardous Polymerization: Does not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Product or Ingredients: No data is specifically available for this product and therefore this toxicological information is based on data available for the ingredients.

Routes of Exposure: Exposure will most likely occur through skin contact or form inhalation of mechanically or thermally generated oil mists.

Skin and Eye: This product is not a primary skin irritant after exposure of short duration.

Chronic / Other Effects: Prolonged and repeated contact with skin can cause deflating and drying of the skin resulting in skin irritation and dermatitis. Long term intensive exposure to oil mist may cause benign lung fibrosis.

The following ingredients are cited on the lists below: None

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NTP CARC, NTP SUS, IARC 1, IARC 2A, IARC 2B, OSHA CARC

This material is not known to contain any chemical listed as a carcinogen or suspected carcinogen by OSHA Hazard Communication Standard 29CFR 1910.1200, IARC, or the National Toxicology Program (NTP) at a concentration greater than 0.1%.

SECTION 12. ECOLOGICAL INFORMATION

GHS Classification: No classified hazards

Toxicity: Experimental studies on the base oil component of lubricating greases show that acute aquatic toxicity values are greater than 1000 mg/L. These values are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions. However, there is insufficient information available on the toxicity of the thickening agents used in greases. They should be regarded as capable of causing long term adverse effects in the aquatic environment.

Persistence and Degradability: The base oil constituents of greases are expected to be inherently, but not readily biodegradable. Some of the thickening agents may be readily biodegradable.

Bioaccumulative Potential: Log Kow values measured for the hydrocarbon components of this material range from 4 to greater than 6, and therefore are regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

Mobility in Soil: Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. Components may behave differently in the aquatic environment with soaps dispersing and dissolving to some extent in water while the hydrocarbons will float on the surface due to their low water solubility. The hydrocarbon portion would be expected to show low mobility in soil and water. The major environmental fate would be expected to be biodegradation.

Other adverse effects: None anticipated.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Therefore, it may be disposed of as an industrial waste in a manner acceptable to good waste management practice and in compliance with applicable local, state and federal regulations.

Disposal Recommendations: Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

Regulatory Disposal Information: To the best of Royal Manufacturing Company, LP knowledge, this product is not regulated by CERCLA/RCRA as a hazardous waste or material. However, this product has not been tested for the toxicity characteristic via the Toxicity Characteristic Leaching Procedure.

Empty Container Warning: Do not attempt to refill or clean containers since residue is difficult to remove. Empty drums should be completely drained, properly bunged and returned to a drum re-conditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 14. TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Shipping Description: Petroleum lubricating oil, not regulated as a hazardous material for transportation under 49 CFR

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Note: If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49 CFR, Part 130 apply. (Contains oil)

International Maritime Dangerous Goods (IMDG)

Shipping Description: Petroleum lubricating oil; not regulated as dangerous goods for transport under the IMDG code

Note: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 25.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

International Civil Aviation Org. / International Air Transport Assoc. (ICAO/IATA)

Shipping Description: Petroleum lubricating oil; not regulated as dangerous goods for transport under the ICAO TI or IATA DGR

Note: U.S. DOT compliance requirements may apply. See 49 CFR 171.22, 23 & 24.

SECTION 15. REGULATORY INFORMATION

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

Acute (Immediate) Health Hazard: No

Chronic (Delayed) Health Hazard: No

Fire Hazard: No

Pressure Hazard: No

Reactive Hazard: No

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1

01-2A=IARC Group 2A

01-2B=IARC Group 2B

02=NTP Carcinogen

03=EPCRA 313

04=CA Proposition 65

05=MA RTK

06=NJ RTK

07=PA RTK

No components of this material were found on the regulatory lists above.

CERCLA/SARA - Section 313 and 40 CFR 372:

This material contains 1-5% Zinc Oxide CAS 1314-13-2 which is listed as zinc and zinc compound subject to the reporting requirements of SARA 313 and 40 CFR 372.

EPA (CERCLA) Reportable Quantity (in pounds):

This material does not contain any chemicals with CERCLA Reportable Quantities.

California Proposition 65:

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

National Chemical Inventories:

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All components comply with the following chemical inventory requirements: AICS (Australia), DSL(Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines),TSCA (United States).

WHMIS Hazard Class:

None

U.S. Export Control Classification Number: EAR99

SECTION 16. OTHER INFORMATION

HMIS RATINGS: Health: 0 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Health and Environmental Label Language

CAUTION : Contains Petroleum Lubricant. Repeated skin contact can cause skin disorders .

PRECAUTIONARY MEASURES : Avoid excessive & prolonged skin contact. Wash thoroughly after handling. Avoid generation and inhalation of oil mists .

INSTRUCTIONS IN CASE OF FIRE OR SPILL : In case of fire, use water spray, foam, dry chemical or carbon dioxide. Water spray may be ineffective, but can be used to cool containers. In case of spill, do not use water, soak up with absorbent material .

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

| | |
|---|---|
| OSHA - Occupational Safety and Health Administration | TWA - Time Weighted Average |
| STEL - Short-term Exposure Limit | PEL - Permissible Exposure Limit |
| ACGIH - American Conference of Government Industrial Hygienists | CAS - Chemical Abstract Service Number |
| GHS - Globally Harmonized System | SDS - Safety Data Sheet |
| API - American Petroleum Institute | IMO/IMDG - International Maritime Dangerous Goods Code |
| DOT - Department of Transportation (USA) | NCEL - New Chemical Exposure Limit |
| IARC - International Agency for Research on Cancer | NFPA - National Fire Protection Association (USA) |
| EPA - Environmental Protection Agency | SCBA - Self-Contained Breathing Apparatus |
| TLV - Threshold Limit Value | NTP - National Toxicology Program (USA) |
| HMIS -Hazardous Materials Identification System | WHMIS -Workplace Hazardous Materials Information System |
| NIOSH-National Institute for Occupational Safety and Health | TSCA-Toxic Substances Control Act |
| CASRN - Chemical Abstracts Service | CERCLA - The Comprehensive Environmental |

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|--|---|
| Registry Number | Response, Compensation, and Liability Act |
| INSHT - National Institute for Health and Safety at Work | IOPC - International Oil Pollution Compensation |
| LEL - Lower Explosive Limit | NE - Not Established |
| SARA - Superfund Amendments and Reauthorization Act | UEL - Upper Explosive Limit |

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Disclaimer of Warranty : The above information is based on the data of which we are aware and is believed to be correct as of the data 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 modification 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.