

Material Safety Data Sheet

Royal 98 Lithium Complex EP Grease



Product Name: Royal 98 Lithium Complex EP Grease

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: Royal 98 Lithium Complex EP Grease
Product Description: Lithium Complex Grease
Product Code: 910 BB, BA and BF
Intended Use: Automotive and Industrial

Company Identification:

Manufacturers Name: Royal Mfg Co LP
Address: P.O. Box 693, Tulsa, OK 74101- 0693
Telephone Number: (918) 584 - 2671
Emergency: (918) 584 - 2671

SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	TLV/PEL (mg/M3)	Weight %
Base Oil	Mixture	5 (As Oil Mist)	> 85
Proprietary Additives	Mixture	E	< 15

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 3: HAZARD IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines. (See Section 15.)

Potential Health Effects: Excessive exposure may result in eye, skin or respiratory irritation. High-pressure injection under skin may cause serious damage.

NFPA Rating: Flammability: 1, Reactivity: 0, Health: 0

HMIS Rating: Flammability: 1, Reactivity: 0, Health: 0

Note: This material should not be used for any other purpose than the intended use listed in Section-1 without expert advice. Health studies on similar products have indicated that chemical exposure may cause potential human health risks which may vary from person to person.

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SECTION 4: FIRST AID MEASURES

Eye Contact: Immediately flush with large quantities of cool water for at least 15 minutes. Get medical attention.

Skin Contact: Wash off with soap and water.

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

Ingestion: Do NOT induce vomiting. Get medical attention.

SECTION 5: FIRE AND EXPLOSION DATA

Extinguishing Media:

Appropriate Extinguishing Media: Water Spray (fog), dry chemical, foam, halon, or carbon dioxide.

Inappropriate Extinguishing Media: Water stream may splash burning liquid and spread fire.

Fire Fighting:

Fire Fighting Procedures: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply. Fire fighters should use self-contained breathing apparatus (SCBA) to fight fires. Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Aldehydes, incomplete combustion products, Smoke, Fume, Sulfur oxides, oxides of carbon.

Flammability Properties:

Flashpoint (Cleveland Open Cup): 455 °F (235°C)

Flammable Limits (Approximate volume% in Air): LEL: NA UEL: NA

Autoignition Temperature: NE

SECTION 6: ACCIDENTAL RELEASE MEASURES

Notification Procedure: Contain any spills with absorbents to prevent migrations and entry into sewers or streams. Take up small spills with dry chemical absorbent. Large spills may be taken up with pump or vacuum and finished off with dry chemical absorbent; May require excavation of contaminated soil.

Spill Management:

Land Spill: Contain any spills with absorbents to prevent migrations and entry into sewers or streams. Take up small spills with dry chemical absorbent. Large spills may be taken up with

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pump or vacuum and finished off with dry chemical absorbent; May require excavation of contaminated soil.

Water Spill: Confine the spill immediately with booms. Stop leak, if you can do so without risking personal safety. Report spills as required to appropriate authorities. Remove from the surface by skimming or with suitable absorbents.

Environmental Precautions:

Large spills should be diked for later recovery or disposal. Spills may be taken up with pump or vacuum and finished off with dry chemical absorbent; May also require excavation of contaminated soil. 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. 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.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid contact with skin. Prevent spills and leaks to avoid slipping hazards.

Storage: Keep containers sealed until ready for use. Avoid excessive long-term storage temperatures to prolong shelf life. Maximum storage temperature: 120F - Store in well ventilated areas.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure limits/standards for materials that can be formed when handling this product: When mists/aerosols can occur, the following are recommended: 5 mg/m³ – ACGIH TLV, 10 mg/m³ – ACGIH STEL, 5 mg/m³ – OSHA PEL

Engineering Control: The level of protection and types of control necessary will vary depending upon potential exposure conditions. Under normal conditions, no special control required when used in a well-ventilated area with local exhaust ventilation.

Personal Protection: 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.

Respiratory Protection: None required in normal use. Use only NIOSH/MSHA Organic vapor approved equipment if necessary.

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Hand Protection: Chemical resistant gloves are recommended. No protection is required in normal use.

Eye Protection: Goggles or safety glasses with side shields are recommended.

Skin and Body Protection: Chemical / oil resistant clothing if contact with material is likely. NO skin protection is ordinarily required under normal conditions of use.

Special Hygiene Measures: Practice good personal hygiene. Wash hands after use and handling.

Environmental Control: See Section 6, 7, 12, 13.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

General Information:

Physical State: Semi Solid Grease

Color: Blue

Odor: Slight petroleum odor

Odor Threshold: None

Important Health, Safety and Environmental Information :

Relative Density (at 15 C): 0.87

Flashpoint (Cleveland Open Cup): 455 F (235C)

Flammable Limits (Approximate volume% in Air): LEL: NE ; UEL: NE

Autoignition Temperature: NE

Boiling Point / Range: NE

Vapor Density (Air = 1): < 1 mm

Vapor Pressure, mmHg at 25C: < 1 mm

Evaporation Rate (n-butyl acetate = 1): NE

pH: NE

Log Pow (n-Octanol/Water Partition Coefficient): NE

Solubility in Water: Slight

Viscosity of oil used: VG 220

Oxidizing Properties: See Section 3, 15, 16.

Other Information:

Freezing Point: NE

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Melting Point: NE

Pour Point: NE

DMSO Extract (mineral oil only), IP-346: NE

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

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

Ecotoxicity: Material is not expected to be harmful to aquatic organisms.

Mobility: Base oil component – Low solubility and float and is expected to migrate from water to the land; Expected to partition to sediment and wastewater solids.

Persistence and Degradability:

Biodegradation: ND

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SECTION 13: DISPOSAL INFORMATION

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

LAND-DOT: Not Regulated for Land Transportation

LAND-TDG: Not Regulated for Land Transportation

SEA-IMDG: Not Regulated for Sea Transport

AIR-IATA: Not Regulated for Air Transport

SECTION 15: REGULATORY INFORMATION

OSHA Hazard Communication Standard: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

WHMIS: Not a controlled product

Chemical Inventory Listing: TSCA

EPCRA: This material contains no extremely hazardous substances.

SARA (311/312) Reportable Hazard Categories: None

SARA (313) Toxic Release Inventory: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program

TSCA: This material is in compliance with the Toxic Substances Control Act (15USC2601-2629)

SECTION 16: OTHER INFORMATION

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NE = Not Established, ND = Not Determined, NA = Not Applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Date: March 12, 2010

Supersedes: NIL

Prepared by: Riverside Laboratories

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