

ALCO-EP™ ECF™

EXTREME-SERVICE MULTIPURPOSE GREASE

OSPAR Commission - HOCNF

Classification - "Yellow" Rating for Norway

- "E" for the United Kingdom & The Netherlands

DESCRIPTION

ALCO-EP™ ECF™ is a premium, state-of-the-art, multi-purpose calcium sulfonate complex grease thickening a blend of synthetic oils selected to provide the level of biodegradation required to meet the Norwegian "Yellow" and the combined UK and Netherlands "E" categories. These are the most safe environmental ratings for a lubricating grease. The non-plating, organic EP/anti-wear additives allow **ALCO-EP ECF** to be used where tolerances are low and/or speeds are high.

ALCO-EP ECF also contains polymer additives, further enhancing the inherent water resistance of a calcium complex-based grease. **ALCO-EP ECF** is extremely resistant to rust and corrosion and is ideally suited for use in high-moisture areas, including subsea applications.

- Operating Range from -10°F (-23°C) to 450°F (232°C)
- Superior rust and corrosion protection for maximum service life under harsh conditions
- Dropping Point 500°F (260°C)
- Polymer additives for extreme water resistance
- Biodegradable
- Color - Pale Red
- Exceeds Military specification MIL-G-18458B-SH

APPLICATIONS

Specially formulated and developed for subsea or other conditions where extreme water resistance is necessary. Highly developed additive package makes **ALCO-EP ECF** the premier, multipurpose grease for hostile environments. Ideal for certain RISER, WASH PIPE, and other proprietary connection designs.

PRODUCT CHARACTERISTICS

Thickener	Calcium Complex
Fluid Type	Synthetic & Vegetable Oils
Color/Appearance	Pale Red StickyGrease
Dropping Point (TYPICAL)	500°F (260°C)
Specific Gravity	0.96
Density (lb/gal)	8.0
Additive Type	EP/AW, R&O
Flash Point (ASTM D-92)	>430°F (221°C)
Autoignition Point (CALCULATED)	>500°F (260°C)
NLGI Grade	2
Penetration @77°F (ASTM D-217)	265-295
Copper Strip Corrosion (ASTM D-4048)	1A
Wear Scar Diameter (ASTM D-2266)	0.7
Oxidation Resistance (ASTM D-942) PSI Drop, 100 hours	<5.0

PACKAGING

Code No.	Container Size	Container
37150	14 oz.	Cartridge
37105	1 lb.	Can
37106	5 lb.	Pail
37116	35 lb.	Pail
37124	120 lb.	Drum
37129	400 lb.	Drum

LIMITED WARRANTY

Jet-Lube, Inc. makes the Limited Express Warranty that at the date of delivery, this product shall be free from defects in Jet-Lube, Inc. materials and workmanship.

This Limited Express Warranty is expressly in lieu of any other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose, and of any other obligation on the part of Jet-Lube, Inc.

The sole remedy for breach of the Limited Express Warranty shall be the refund of the purchase price. All other liability is negated and disclaimed, and Jet-Lube, Inc. shall not be liable for incidental or consequential damages.

CORPORATE LOCATIONS

Houston, Texas—World Headquarters

Maidenhead, England

Edmonton, Canada

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JET-LUBE, INC.

MATERIAL SAFETY DATA SHEET

Product Name: **ALCO-EP™ ECF™**
Chemical Family: Synthetic & vegetable oil based lubricating grease
Use: Lubricant and preservative

Manufacturer/Supplier: JET-LUBE, INC.
Address: 4849 Homestead Rd., Ste. #200
 Houston, TX, 77028 USA **Phone:** 713-674-7617
Emergency Phone: 713-674-7617 **Fax:** 713-678-4604
Chemtrec 24 hours (USA): 800-424-9300

Hazardous Components	CAS No.	Wt%	OSHA PEL	ACGIH TLV	Other Limits of Exposure
NONE					
Nonhazardous Components Lubricating Grease (Contains no carcinogens)	74869-21-9	100	NA	NA	NA

Main Hazards—Health Effects

Eyes: May cause irritation. **Inhalation:** Viscous nature may block breathing passages if inhaled.
Ingestion: May cause diarrhea. **Skin:** Possible rash for persons with hypersensitivity.

Eyes: Flush with water until all residual material is gone. If irritation persists, seek medical help. **Inhalation:** Clear air passage. If respiratory difficulty continues, seek medical help. **Ingestion:** Wash out mouth immediately. Consult physician. **Skin:** Wash thoroughly with hand cleanser, followed by soap & water. Contaminated clothing should be dry cleaned before reuse.

Extinguishing Media: Foam, dry powder, Halon®, carbon dioxide, sand, earth & water mist. **Unsuitable Extinguishing Media:** Water jet.
Protective Equipment for Fire fighting: Self-contained breathing apparatus.

Personal Precautions: Wear gloves & protective overalls. **Environmental Precautions:** Nonhazardous **Spillage:** Scrape up bulk, then wipe up remainder with cloth. To prevent walking hazard, pick up remaining residue with diatomaceous earth.

Handling: Do not allow it to enter drains (it may clog drain) **Storage:** Do not store at elevated temperatures.

Respiratory Protection: None needed. **Hand Protection:** Protective gloves for hypersensitive persons. **Eye Protection:** Glasses, if applied to parts in motion. **Body Protection:** Overalls.

Physical State: Semisolid paste **Color:** Pale Red **Odor:** Neutral **pH:** Neutral **Boiling Range/Point °F (°C):** <600 (316)
Melting Point °F (°C): None **Flash Point (COC) °F (°C):** 500 (260) **Autoignition Temperature °F (°C):** >500 (260)
Explosive Properties: LEL: 0.9% UEL: 7% **Evaporation Rate (Butyl Acetate):** <0.01 **Partition Coefficient (Log Pow):** N/A
Vapor Pressure (kPa): <0.01 **% Volatiles:** Nil **Density (g/cm³):** 0.97 **Flammability:** Not flammable at ambient temperature.
OAR Value: N/A **Oxidizing Properties:** None **Water Solubility:** Not readily soluble **Vapor Density:** >5

Stability: Chemically stable under normal conditions. No photoreactive agents. **Conditions to Avoid:** Powerful sources of ignition & extreme temps. **Materials to Avoid:** Strong inorganic & organic acids, oxidizing agents. **Hazardous Decomposition Products:** Burning generates smoke, airborne soot, hydrocarbons & oxides of carbon and nitrogen. Residue mainly comprised of mineral oxides.

Acute Toxicity: Not known **Irritancy—Skin:** None known **Skin Sensitization:** Not known **Subacute/Sub-chronic Toxicity:** Not known
Genotoxicity: None known **Chronic Toxicity:** None known **California Prop 65:** N/A **Carcinogen:** NTP: No IARC: No OSHA: No
EC Classification (67/548/EEC): No **Allergens:** None known **LC-50:** >4000mg/kg—extrapolated from component data. **LD-50:** N/A

Possible Effects: Tested and shown nonhazardous in a marine environment.

Behavior: Relatively well behaved. Bioaccumulation nil.

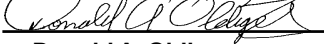
Environmental Fate: Will not cause notable contamination. Nontoxic to marine or land organisms.

Product Disposal: Do not incinerate. Contact waste disposal company or local authority for advice. **Container Disposal:** Pails without liner—see Product Disposal section above. Pails with plastic liner—pail may only be disposed of via standard waste disposal services, recycled or reused. Liner—see Product Disposal section above.

Not classified as hazardous for transport. **D.O.T.:** Nonhazardous **UN No.:** Nonhazardous **Air Transport (ICAO & IATA):** Nonhazardous
Sea Transport (IMO & IMDG): Nonhazardous **Road & Rail Transport (ADR/RID):** Nonhazardous

Labeling Information: None needed **EC Annex 1 Classification:** Not Applicable. **R Phrases:** Not classified
S Phrases: S 24/25 **Ozone Depleting Chemicals:** Not applicable. **TSCA:** All components are listed.
WHMIS (Canada): Not controlled **Canadian DSL:** All components listed. **40 CFR Part 372 (SARA Section 313):** N/A
CERCLA: Nonhazardous **RCRA Hazard Class:** Nonhazardous **SARA 311/312:** None **TSCA 12B Components:** None

SDS first issued. SDS data revised. **New Jersey Right To Know:** See Section II

Signature: 
Prepared by: Donald A. Oldiges
Date Issued: September 10, 2008

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LEGEND	
I.	IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY
II.	COMPOSITION INFORMATION ON INGREDIENTS
III.	HAZARDS IDENTIFICATION
IV.	FIRST AID MEASURES
V.	FIRE FIGHTING MEASURES
VI.	ACCIDENTAL RELEASE MEASURES
VII.	HANDLING AND STORAGE
VIII.	EXPOSURE CONTROL/PERSONAL PROTECTION
IX.	PHYSICAL AND CHEMICAL PROPERTIES
X.	STABILITY AND REACTIVITY
XI.	TOXICOLOGICAL INFORMATION
XII.	ECOLOGICAL INFORMATION
XIII.	WASTE DISPOSAL
XIV.	TRANSPORT INFORMATION
XV.	REGULATORY INFORMATION
XVI.	OTHER INFORMATION

HMIS SYMBOL

HEALTH	0
FLAMMABILITY	1
REACTIVITY	0
PPI	B

NFPA SYMBOL

