

ECO-SAFE™

NONMETALLIC THREAD COMPOUND

DESCRIPTION

ECO-SAFE™ nonmetallic thread compound is a premium quality, nonmetallic compound containing carbon based fibers and additives and other natural extreme pressure and anti-wear additives. These are blended into **JET-LUBE's** high temp calcium complex base grease. This new base grease offers the additional advantage of superior adhesion to wet steel surfaces, resistance to water wash-off, and most drilling muds. **Especially effective for invert or high-pH muds.**

- Excellent performance on high-chrome or nickel alloys
- Contains no metals
- NSF H2 Registered
- Extreme-pressure additives provide additional protection against seizing and galling
- Completely biodegradable
- Nontoxic
- High film strength
- High frictional properties ideal for casing drilling applications

With **ECO-SAFE**, "metal free" doesn't mean "low performance". It facilitates a consistent, easy make up on par with traditional thread compounds without the cost volatility and environmental concerns associated with metallic compounds. **ECO-SAFE** offers excellent protection to threaded connections and the environment.

PRODUCT CHARACTERISTICS

Thickener	Calcium Complex
Fluid Type	Petroleum
Dropping Point (ASTM D-2265)	≥450°F (232°C)
Specific Gravity, typical	1.30
Density (lb/gal), typical	10.30
Oil Separation (ASTM D-6184)	<3.0
Wt. % Loss @ 212°F (100°C)	
Flash Point (ASTM D-92)	>430°F (221°C)
NLGI Grade	1
Penetration @ 77°F (ASTM D-217)	300 - 330
Copper Strip Corrosion (ASTM D-4048)	1A, typical
Service Temperature	
Oilfield/Mining/Construction Drilling	-20°F (-29°C) to 500°F (260°C)

Shelf Life: Minimum two years from manufacture date.

PACKAGING

Code No.	Container Size	Container
14523	1 Gal.	Pail
14512	2 Gal.	Pail
14515	5 Gal.	Pail

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

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Edmonton, Canada

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WATERWELL

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JET-LUBE, INC.

MATERIAL SAFETY DATA SHEET

I Product Name: ECO-SAFE™ Chemical Family: Complex grease base Use: Thread lubricant and sealant, anti-seize compound	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
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	Hazardous Components	CAS No.	Wt%	OSHA PEL	ACGIH TLV	Other Limits of Exposure
II	Lubricating Grease	74869219	45-50	N/A	N/A	N/A
	Nonhazardous Blend	14807966/13463677 7789755	40-60			

III Main Hazards—Health Effects
Eyes: May cause irritation. **Inhalation:** Viscous nature may block breathing passages if inhaled. **Ingestion:** May cause diarrhea.
Skin: For hypersensitive persons, may irritate the skin after prolonged periods of contact.

IV
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.

V
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.

VI
Personal Precautions: Wear gloves & protective overalls. **Environmental Precautions:** Do not allow it to enter drains. **Spillage:** Scrape up bulk, then wipe up remainder with cloth. To prevent walking hazard, pick up remaining residue with diatomaceous earth.

VII
Handling: No special handling precautions necessary. **Storage:** Do not store at elevated temperatures.

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

IX
Physical State: Semisolid paste **Color:** Beige **Odor:** Petroleum **pH:** Neutral **Boiling Range/Point °F (°C):** UN
Melting Point °F (°C): >400 (204) **Flash Point (COC) °F (°C):** >430 (221) **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 **V.O.C. Content:** Nil **Density (g/cm³):** 1.26 **Flammability:** Not flammable at ambient temperature.
OAR Value: N/A **Oxidizing Properties:** None **Water Solubility:** Nil **Vapor Density:** >5

X
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 & copper reactive agents. **Hazardous Decomposition Products:** Burning generates smoke, airborne soot, hydrocarbons & oxides of carbon, sulfur & nitrogen. Residue mainly comprised of soot & mineral oxides.

XI
Acute Toxicity: Not known. **Irritancy—Skin:** Very mild. **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/l - extrapolated from component data. **LD-50:** N/A


XII
Possible Effects: None
Behavior: Relatively well behaved. Bioaccumulation potential nil.
Environmental Fate: Highly unlikely to cause widespread contamination. Nontoxic to marine or land organisms.

XIII
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.

XIV
 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

XV
Labeling Information: None needed **EC Annex 1 Classification:** Not Applicable. **R Phrases:** R22—harmful if swallowed.
S Phrases: N/A, as known. **Ozone Depleting Chemicals:** N/A **TSCA:** All components are listed. **TSCA 12B Components:** None
WHMIS (Canada): Not controlled. **Canadian DSL:** All components listed. **40 CFR Part 372 (SARA Section 313):** N/A
SARA 311/312: None **CERCLA:** Nonhazardous **RCRA Hazard Class:** Nonhazardous

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

Signature: 
Prepared by: Donald A. Oldiges
Date Issued: November 5, 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	1
FLAMMABILITY	1
REACTIVITY	0
PPI	B

