RUN-N-SEAL ® EXTREME

METAL-FREE THREAD SEALANT

DESCRIPTION

JET-LUBE® RUN-N-SEAL® EXTREME is a patented metal-free, high-pressure sealant alternative for API-MODIFIED. The compound contains graphite and other nonmetallic, inorganic, anti-wear additives blended into a state-of-the-art, high-temperature, rust-inhibiting complex soap based grease. RUN-N-SEAL EXTREME contains a large volume of solids enhanced by a higher concentration of large-sized particles. The improved distribution of particle sizes and volume of solids provides an excellent seal in large and small diameter, non-shouldered threads. The complex soap grease provides a high melting point, ensures brushability over a wide range of temperatures and has excellent inherent water resistance. It sticks to wet and oily steel, ensuring the compound will not wash off threads.

RUN-N-SEAL EXTREME has been tested for California Code of Regulations - Title 22, Chapter 30, Article II and is not classified as a hazardous waste. **RUN-N-SEAL EXTREME** is nontoxic, even in a marine environment, as evidenced by test results on the California Hazardous Waste Assessment Bioassay and a "D" rating in the North Sea (OSPAR) Guidelines.

- · Enhanced rust inhibiting properties
- Friction factor of 0.9 (relative to API-MODIFIED)
- Contains additives for protection against rust, corrosion, and oxidation
- Prevents leakage (seals to 10,000 psi)
- High film strength to protect against wear, galling, and seizure
- Exceeds all of the performance criteria described in API spec. 5CT
- Tested in conformance with API RP 5A3
- H₂S Inhibited

APPLICATIONS

RUN-N-SEAL EXTREME is recommended for use on OCTG connections, API connections, and subsurface production tools. RUN-N-SEAL EXTREME will lubricate, seal, and protect threaded connections of oilfield tubular goods on makeup, in service, and in storage. For premium thread designs, use JET-LUBE® SEAL-GUARD™. For an environmentally friendly premium thread compound, use JET-LUBE® SEAL-GUARD™ ECF.

PRODUCT CHARACTERISTICS

Thickener	Complex Soap
Fluid Type	Petroleum
Dropping Point (ASTM D-2265)	450°f (232°C)
Specific Gravity	1.23
Density (lbs./gal.)	10.25
Oil Separation	<3.0
Wt. % Loss @ 212°F (100°C	C)
Flash Point (ASTM D-92)	>450°F (232°C)

Flash Point (ASTM D-92) >450°F (232°C NLGI Grade 1

Penetration @ 77°F 325 - 350

(ASTM D-217)

Copper Strip Corrosion 1A

(ASTM D-4048)

4-Ball Weld Point, kgf 800

(ASTM D2596)

Friction Factor 0.9

(Relative to API-MODIFIED)

PACKAGING

Code No.	Container Size	Shipping Wt.		
12223	1 gal.	11 lb.		
12212	2 gal.	22 lb.		
12215	5 gal.	54 lb.		

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

IET-LUBE, INC. MATERIAL SAFETY DATA SHEET

Product Name: RUN-N-SEAL® EXTREME

Chemical Family: Petroleum based thread compound & sealant Use: Sealant for tubing, casing, line pipe & other tapered, threaded connections.

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	of Exposure
Petroleum oil	64742570/64742525	60-100	Oil mist	N/A TWA-5mg/M³	STEL: 10mg/M ³
Nonhazardous Blend	68307879/57855773 7782425/12003382 14807966/471341 9002840	30-60	UN	UN	UN

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.

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: 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.

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

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

Physical State: Semisolid gel Color: Black Odor: Petroleum pH: Neutral Boiling Range/Point °F (°C): <600 (316) Melting Point °F (°C): 500 (260) Flash Point (COC) °F (°C): 450 (232) 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 Percent Volatiles: Nil **Density (g/cm³):** 1.23 **Flammability:** Not flammable at ambient temperature. OAR Value: N/A Oxidizing Properties: None Water Solubility: Nil 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 & copper reactive agents. Hazardous Decomposition Products: Burning generates smoke, airborne soot, hydrocarbons & oxides of carbon, sulfur & nitrogen. Residue mainly comprised of soot & mineral oxides.

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: >2000gm/l—extrapolated from component data

Possible Effects: In extreme cases, may gernerate oil fractions that could act as a marine pollutant. Occurrences of this nature are highly unlikely. Behavior: Relatively well behaved. Bioaccumulation potential nil.

Environmental Fate: Highly unlikely to cause widespread 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: R22—harmful if swallowed. S Phrases: None applicable, as known. 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): None SARA 311/312: None **CERCLA:** Nonhazardous RCRA Hazard Class: Nonhazardous 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: October 30, 2007

As of issue date, the information contained herein is accurate and reliable to the best of **JET-LUBE'S** knowledge. **JET-LUBE®** does not warrant or guarantee its accuracy or reliability and shall not be liable for any loss or damage arising out of the use thereof. It is the user's responsibility to satisfy itself that the information offered for its consideration is suitable for its particular use.

LEGEND IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY COMPOSITION INFORMATION ON INGREDIENTS HAZARDS IDENTIFICATION FIRST AID MEASURES

FIRE FIGHTING MEASURES

VI. ACCIDENTAL RELEASE MEASURES

HANDLING AND STORAGE

EXPOSURE CONTROL/PERSONAL PROTECTION

PHYSICAL AND CHEMICAL PROPERTIES

STABILITY AND REACTIVITY

TOXICOLOGICAL INFORMATION XII ECOLOGICAL INFORMATION

WASTE DISPOSAL

TRANSPORT INFORMATION

REGULATORY INFORMATION OTHER INFORMATION

HMIS SYMBOL

HEALTH	1
FLAMMABILITY	1
REACTIVITY	1
PPI	В

NFPA SYMBOL

