

JET-LOK[®] III

HIGH FRICTION & SEALING COMPOUND

DESCRIPTION

JET-LUBE's JET-LOK[®] III is a high friction thread compound engineered to provide high initial torques and adds the benefit of an anaerobic set to create even higher resistance to downhole makeup. In addition to its frictional benefits for severe drilling applications such as downhole tools, hammers, subs and motors. JET-LOK III sets to give an instant low pressure seal and high pressure seal when fully cured. For expandable casing applications JET-LOK III's cured properties are ideal, setting to a low durometer nearly elastomeric consistency. It's like a paint on oil, soft enough to give under the expansion forces enlarging the casing yet stiff enough to provide a positive seal.

In a number of severe drilling applications (under 400°F (204°C)) conventional drilling compounds are not capable of restricting downhole makeup. In some drilling environments, tool joints and drill collars are being torqued up to 90% of yield in hopes of restricting further makeup. Downhole makeup can result in stretched pins, belled boxes or even severed connections.

JET-LOK III has friction factor of 1.1. This means that for a joint that takes 4,000 foot pounds of torque with conventional products, it will take 4,400 foot pounds of torque to achieve the same degree of turns. With full cure the connection will lock in and require up to 200 percent of the makeup torque to breakout the connection. For applications where the product must be applied and utilized quickly, and activator must be employed to speed up the setting reaction. It is also important on inactive alloys such as stainless and galvanized steel and high chrome alloys.

APPLICATIONS

Downhole motor assemblies, subs, hammers and jars and other shouldered and non-shouldered threaded connections in applications less than 400°F where high friction factor products are required.

TECHNICAL FEATURES

Resin Type	Methacrylate
Color	Grey
Cure Speed with Activator	<10 minutes
Cure Speed w/o Activator	24 hours
Viscosity (Thixotropic)	300,000 - 400,000 cps
Gap Fill	N/A
Flash Point	>200°F (93°C)
Shelf Life	12 months
Specific Gravity	1.1
Operating Temperature	-65°F (-54°C) to >400°F (204°C)
Friction Factor	1.1

Compared to API Modified @
20,000 psi stress

CURED PERFORMANCE

Full Cure Time	24 hours
Shear Strength	10,000 psi

HEALTH & SAFETY IN USE

IRRITANT: Contains Methacrylate Esters which may irritate the eyes, respiratory organs and skin. In case of contact with the skin, wash immediately with plenty of soap and water.

PACKAGING

Code No.	Size	Container
60471	300 gram	Can

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

I **Product Name:** JET-LOK® III
Chemical Family: Anaerobic composition
Use: Pipe thread 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

Hazardous Components	CAS No.	Wt%	OSHA PEL	ACGIH TLV	Other Limits of Exposure
Methacrylate Esters	25852475/25103871	60-100	No Data	No Data	No Data
Nonhazardous Blend	82980548/7620771	20-30	UN	>2.5mg/M ³	STEL: UN
	7782425/12001262				
	14807966/13167653/112945525				
Cumene Hydroperoxide	80159	1-3	No Data	No Data	No Data
Saccharin	81072	1-3	No Data	No Data	No Data

III **Main Hazards—Health Effects**

Eyes: May cause irritation. **Inhalation:** Inhalation of concentrated vapors may cause irritation. **Ingestion:** May cause diarrhea or blockage. **Skin:** Possible rash for persons with hypersensitivity.

IV **Eyes:** Flush with water until all residual material is gone. If irritation persists, seek medical help. **Inhalation:** Clear air passage, remove to fresh air. If respiratory difficulty continues, seek medical help. **Ingestion:** 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 solvent. Allow mass to dry prior to disposal.

VII **Handling:** Utilize protection gloves. **Storage:** Do not store at temperatures above 110°F to preserve shelf life.

VIII **Respiratory Protection:** None needed, in well ventilated areas. **Hand Protection:** Protective gloves for hypersensitive persons.

Eye Protection: Glasses, if applied to parts in motion. **Body Protection:** Overalls.

IX **Physical State:** Semi-solid Paste **Color:** Opaque Grey **Odor:** Irritating **pH:** Neutral **Boiling Range/Point °F (°C):** >300 (148)
Melting Point °F (°C): >350 (177) **Flash Point (COC) °F (°C):** >200 (93) **Autoignition Temperature °F (°C):** >500 (260)
Explosive Properties: LEL: UN UEL: UN **Evaporation Rate (Butyl Acetate):** N/A **Partition Coefficient (Log Pow):** N/A
Vapor Pressure (kPa): <5 **Percent Volatiles:** 8% Typ. **Density (g/cm³):** 1.15 **Flammability:** Not flammable at ambient temperature.
OAR Value: N/A **Oxidizing Properties:** None **Water Solubility:** Nil **Vapor Density:** N/A

X **Stability:** Chemically stable under normal conditions. No photoreactive agents.

Conditions to Avoid: Powerful sources of ignition & elevated temp. **Materials to Avoid:** Strong inorganic & organic acids & oxidizing agents. **Hazardous Decomposition Products:** Burning generates smoke, airborne soot, hydrocarbons and oxides of carbon, nitrogen and sulfur. Residue mainly comprised of soot and 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:** Yes, Saccharin **Carcinogen:** NTP: Yes **IARC:** 2B
OSHA: No **EC Class (67/548/EEC):** No **LC-50:** No data **LD-50:** N/A

XII **Possible Effects:** None known.

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: 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):** N/A

CERCLA: Nonhazardous **RCRA Hazard Class:** Nonhazardous **SARA 311/312:** None **TSCA 12B Components:** None

XVI **New Jersey Right To Know:** See Section II

Signature: 
Prepared by: Donald A. Oldiges
Date Issued: November 11, 2005

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	
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	1
PPI	B

NFPA SYMBOL

