

# JET-LUBE, INC.

## MATERIAL SAFETY DATA SHEET

**Product Name:** KOPR-KOTE® Bulk & Aerosol  
**Chemical Family:** Petroleum based lubricating grease  
**Use:** Tool joint and drill collar compound/anti-seize (ML-PRF-907E)/ jacking lubricant

**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
Petroleum oil	64742014/64742525	40-60	Oil mist TWA-5mg/M <sup>3</sup>	N/A	STEL: 10mg/M <sup>3</sup>
Nonhazardous Blend	82980549/471341 7782435/1317335 12001262/14807966	30-60	UN	UN	STEL: UN
Metallic Copper	7440508	10-20	N/A	1mg/M <sup>3</sup>	STEL: 2mg/M <sup>3</sup>
Petroleum Solvent (aerosol)	64742898	0-10	TWA-300ppm	300ppm	UN
Hydrocarbon Propellant (aerosol)	68476857	15-25	1000ppm	1000ppm	N/A

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

**Physical State:** Semisolid paste **Color:** Copper/Bronze **Odor:** Petroleum **pH:** Neutral **Boiling Range/Point °F (°C):** <600 (316)  
**Melting Point °F (°C):** 500 (260) **Flash Point (COC) °F (°C):** 430 (221) **Autoignition Temperature °F (°C):** >500 (260)  
**Propellant Flash Point (COC) °F (°C):** -76 (-60) **Explosive Properties:** LEL: 0.9% UEL: 7% **Evaporation Rate (Butyl Acetate):** <0.01  
**Partition Coefficient (Log Pow):** N/A **Vapor Pressure (kPa):** <0.01 **Density (g/cm<sup>3</sup>):** 1.10 **OAR Value:** N/A  
**Flammability:** Not flammable at ambient temp. **Oxidizing Properties:** None **Water Solubility:** Nil **Vapor Density:** >5 **% Volatiles:** Nil

**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:** >1.98mg/l (actual test data-mysidopsi bahia). **LD-50:** N/A

**Possible Effects:** Highly unlikely to may generate oil fractions that could act as a marine pollutant. **Behavior:** Bioaccumulation potential nil.  
**Environmental Fate:** Highly unlikely to cause widespread contamination. Nontoxic to marine or land organisms.

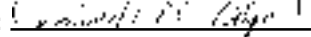
**Product Disposal:** Do not incinerate. Contact waste disposal company or local authority for advice.

**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.**

**D.O.T.:** Consumer Commodity ORM-D **UN No.:** Bulk Nonhazardous Aero 1950, Class 2.1 **Air Transport (ICAO & IATA):** Bulk Nonhazardous Aero Hazardous-pressurized container **Sea Transport (IMO & IMDG):** Bulk Nonhazardous Aero 1950, Class 2  
**Road & Rail Transport (ADR/RID):** Bulk Nonhazardous Aero Class 2, Aerosols

**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. **SARA 311/312:** None  
**WHMIS (Canada):** Bulk Not controlled Aero Class A, B-5 **Canadian DSL:** All components listed. **TSCA 12B Components:** None  
**40 CFR Part 372 (SARA Section 313):** This product contains copper. **CERCLA:** Nonhazardous **RCRA Hazard Class:** Nonhazardous

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

**Signature:**   
**Prepared by:** Donald A. Oldiges  
**Date Issued:** August 26, 2004

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 - BULK

HEALTH	1
FLAMMABILITY	1
REACTIVITY	1
PPI	B

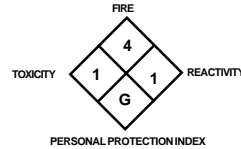
### NFPA SYMBOL



### HMIS SYMBOL - AEROSOL

HEALTH	1
FLAMMABILITY	4
REACTIVITY	1
PPI	G

### NFPA SYMBOL



# **KOPR-KOTE®**

## **HIGH TEMPERATURE ANTI-SEIZE AND GASKET COMPOUND**

### **DESCRIPTION**

**KOPR-KOTE®** is a low friction, anti-seize lubricant manufactured from a combination of micro-size copper flakes and graphite, dispersed in a water resistant grease and fortified with antioxidants, plus rust and corrosion inhibitors. **KOPR-KOTE** contains **CZ-EX® JET-LUBE's** EP additive, providing protection unequalled by competitive brands.

**KOPR-KOTE** provides a shield against metal-to-metal contact, preventing seizure and corrosion. It fills irregularities and imperfections and resists welding, hardening or setting. **KOPR-KOTE** provides low friction and cushions impact and shock loads. Low shear between particles reduces stick-slip, allowing quick disassembly with minimum wrench torque. It will not squeeze out of the threads, gum up or wash off.

- NSF Registered No. 120923
- Conforms to MIL-PRF-907E
- Service rating: -65°F (-54°C) to 1800°F (982°C).
- Contains no lead or zinc.
- Lowers friction; reduces wrench torque.
- Permits reuse of fittings; saves stud, bolt and nut replacement.
- Aluminum complex base for brushability and stability over a wide temperature range.
- Not affected by contraction, expansion or vibration.
- Will not run, drip or settle out.
- Available in convenient aerosol form.

### **APPLICATIONS**

**KOPR-KOTE** is the ideal product to coat the grooves under the top seal and packed on oilfield B.O.P. rams. Also ideal for use on threaded connections, pump housings, flanges, studs, exhaust manifold bolts, compressor heads, autoclaves, lathe centers, etc.

### **PRODUCT CHARACTERISTICS**

Thickener	Aluminum Complex
Fluid Type	Petroleum
Dropping Point (ASTM D-566)	450°F (232°C)
Specific Gravity	1.15
Density (lb/gal)	9.6
Oil Separation (ASTM D-6184)	<3.0
Wt. % Loss @ 212°F (100°C)	
Flash Point (ASTM D-92)	>430°F (221°C)
K-Factor	.15
High Chrome Alloys @ 60,000 PSI Contact Stress	
Penetration @ 77°F (ASTM D-217)	310 - 330
Copper Strip Corrosion (ASTM D-4048)	1A
4-Ball (ASTM D-2596)	
Weld Point, kgf	800
Load Wear Index	125
Propellant (aerosol)	Hydrocarbon
Spray Pattern (aero)	2-4" Cone @ 1'
VOC Content (EPA 624) (aero)	<330 g/liter

**Shelf Life: Minimum two years from manufacture date.**

### **PACKAGING**

Code No.	Container Size	Container
10055	¼ lb.	Brush Top can
10002	½ lb.	Brush Top can
10004	1 lb.	Brush Top can
10007	2 lb.	Plug Top can
10041	12 oz.	Aerosol
10050	14 oz.	Cartridge
10091	1 gal.	Pail
10092	2½ gal.	Pail
10093	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**

Houston, Texas—World Headquarters

Maidenhead, England

Edmonton, Canada

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