

JLS[®] (JET-LUBE[®] SPECIAL) TOOL JOINT COMPOUND

DESCRIPTION

JLS[®] Tool Joint Compound is a high quality product containing premium grade copper flake, amorphous graphite, rust and corrosion inhibitors, and other inorganic solids. All are blended in **JET-LUBE's** unique grease compounded from custom refined, low-sulfur oil to ensure brushability over a wide temperature range, tenacious adherence to all surfaces, resistance to water washout, and prevention of rust/corrosion.

JLS is a result of laboratory and field development efforts spanning several decades. It is manufactured under the industry's toughest quality control regimen and is especially designed to prevent thread and shoulder wear, and to provide superior performance on the rig floor and downhole in medium duty drilling just as **KOPR-KOTE[®]** and **JET-LUBE 21[®]** perform in more severe conditions. **For invert muds or high-pH muds, a special base grease is available.**

- Lead Free
- Zinc Free
- Formulated with a proprietary blend of copper flake, graphite, and other inorganic additives for protection and prevention of excessive circumferential make-up of tool joints in average drilling conditions.
- Unique high temperature grease base with brushability over a wide temperature range.
- Sticks to wet joints.
- Low sulphur content.
- Consistent rig floor make-up.
- Resistance to further make-up downhole in medium drilling.
- **Available in Arctic and Thermal base greases.**

APPLICATIONS

JLS is recommended for use on tool joints in a variety of drilling depths and formations. It provides consistent control of make-up and break-out in these conditions and protects against galling and seizure. **JLS** prevents excessive stresses which shorten tool joint life, and the metallic solids of **JLS** form a gasket on threads and shoulders that prevent metal-to-metal contact under high torque loads.

PRODUCT CHARACTERISTICS

Thickener	Aluminum Complex
Fluid Type	Petroleum
Color/Appearance	Bronze Paste
Dropping Point (ASTM D-566)	450°F (232°C)
Specific Gravity	1.18
Density (lb/gal)	9.9
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)	310 - 330
Copper Strip Corrosion (ASTM D-4048)	1A
Shell 4-Ball (ASTM D-2596)	
Weld Point, kgf	620
Friction Factor*	1.0 (per API RP-7G)

* Many factors such as pipe size, thread geometry, drilling mud contamination, etc. affect the friction factor. This is a relative number and in all applications experience and prior knowledge should be used to adjust make-up torque accordingly.

PACKAGING

Code No.	Container Size	Shipping Wt.
11823	1 gal.	10 lb.
11812	2 gal.	20 lb.
11815	5 gal.	47 lb.
11824	15 gal.	140 lb.
11829	50 gal.	489 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



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JET-LUBE, INC.

MATERIAL SAFETY DATA SHEET

Product Name: JLS®
Chemical Family: Petroleum based lubricating grease
Use: Tool joint compound.

Manufacturer/Supplier: JET-LUBE, INC.
Address: 4849 Homestead Rd., Ste. #232
 Houston, TX, 77028 USA **Phone:** 713-670-5700
Emergency Phone: 713-670-5700 **Fax:** 713-678-4604
Chemtrec 24 hours (USA): 800-424-9300
Outside the USA: 703-527-3887

Hazardous Components	CAS No.	Wt%	OSHA PEL	ACGIH TLV	Other Limits of Exposure
Lubricating Grease	74869219	50-70	N/A	N/A	STEL: 10mg/M ³
Metallic Copper	7440508	3 - 7	N/A	1mg/M ³	STEL: 2mg/M ³
Nonhazardous Blend	7782425/12001262 14807966/1317653	30-50	UN	UN	STEL: 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.
Eye Protection: Glasses, if applied to parts in motion. **Body Protection:** Overalls.

Physical State: Semisolid paste **Color:** Bronze **Odor:** Petroleum **pH:** Neutral **Boiling Range/Point °F (°C):** >525 (274)
Melting Point °F (°C): 450 (232) **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 **Percent Volatiles:** Nil **Density (g/cm³):** 1.18 **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 Class (67/548/EEC): No **Allergens:** None known. **LC-50:** >1.98 g/lt(mysidopsis bahia) based on assessment from related products. **LD-50:** N/A

Possible Effects: In extreme cases, may generate 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.

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):** Contains copper

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

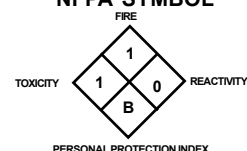
LEGEND


- 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

NFPA SYMBOL



Signature: 
Prepared by: Donald A. Oldiges
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