

# CURÄL™

## AN ECONOMICAL, NONMETALLIC, THREAD COMPOUND FOR USE ON DRILL STRINGS, TUBING & CASING

### DESCRIPTION

**CURÄL™** is a nonmetallic economy compound manufactured by **JET-LUBE®**. Based on the same patented Polymer Chemistry used to develop **POW'R-KOTE®** and **KOV'R-KOTE®**, **CURÄL** is an economical, multifunctional, nonmetallic thread compound.

The synergistic, complex blend of additives lock together under pressure to resist galling, seizure and downhole makeup. The calcium base grease utilized in **CURÄL** gives the compound both moderate heat and good water resistance characteristics. **CURÄL**'s film strength is sufficient enough to allow its use on drill strings for bottom hole assemblies and other light drilling situations as well as workover and production.\* **CURÄL** meets or exceeds all of the performance specifications described in API specification 5CT and set forth in API RP 5A3.

The wide range of particle sizes in **CURÄL** makes it exceptionally good as a high pressure sealant for interference fit threads. The frictional properties have been carefully balanced to allow the compound to be used on tubing and casing with little need for torque compensation (friction factor of 1.1 relative to API-MODIFIED).

- Economical
- **Multifunctional** (for use on both shouldered & interference threads)
- Nonmetallic
- Formulated with a patented blend of high tech polymers, graphite and other additives.
- Contains additives for rust, corrosion and oxidation protection
- Sticks to wet or oily threads
- Arctic and Geothermal grades available

### APPLICATIONS

**CURÄL** is designed to work as an anti-seize compound on shouldered connections, a running and sealing compound on interference threaded connections, and as a storage compound for all types of threaded connections. **CURÄL** provides protection for the workover and production drill string, handling tools, jacking systems, casing, tubing, line pipe, flow lines, subsurface production tools and tank battery installations.

*\*For the more severe applications, KOV'R-KOTE is recommended*

### PRODUCT CHARACTERISTICS

Thickener	Calcium Soap
Fluid Type	Petroleum
Dropping Point (ASTM D-2265)	280°F (138°C)
Specific Gravity	1.32
Density (lb/gal)	11
Oil Separation (ASTM D-6184)	<5.0
Wt. % Loss @ 212°F (100°C)	
Flash Point (ASTM D-92)	>430°F (221°C)
NLGI Grade	1 to 1½
Penetration @77°F (ASTM D-217)	315 - 340
Copper Strip Corrosion (ASTM D-4048)	1A
Shell 4-Ball (ASTM D-2596)	
Weld Point, kgf	620
Friction Factor for OCTG Relative to API-MODIFIED	1.1
Friction Factor for Drill String (Per RP7G)	
Tool Joints	1.1
Drill Collars	1.1

### PACKAGING

Code No.	Container Size	Shipping Wt.
34223	8 lbs.	9 lbs.
34212	15 lbs.	17 lbs.
34215	40 lbs.	44 lbs.

### 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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www.jetlube.com

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# JET-LUBE, INC.

## MATERIAL SAFETY DATA SHEET

**Product Name:** CURÄL™  
**Chemical Family:** Petroleum based lubricating grease  
**Use:** Tool joint & drill collar compound/anti-seize (MIL-PRF-907E)/tubing and casing line pipe sealant.

**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	64742525/64742014	30-60	0.5mg/M <sup>3</sup>	N/A	STEL: 10mg/M <sup>3</sup>
Nonhazardous Blend	3159624/7620771 7782425/12003382 14807966/9002840	30-60	UN	>2.5mgM <sup>3</sup>	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:** Soft Gel **Color:** Opaque Black **Odor:** Petroleum **pH:** Neutral **Boiling Range/Point °F (°C):** >525 (274)  
**Melting Point °F (°C):** 280 (138) **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/cm<sup>3</sup>):** 1.32 **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 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:** >2000mg/l—extrapolated from component data. **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 wide-spread 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):** N/A

**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

**Signature:**   
**Prepared by:** Donald A. Oldiges  
**Date Issued:** October 19, 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

HEALTH	1
FLAMMABILITY	1
REACTIVITY	0
PPI	B

### NFPA SYMBOL

