



Renewable Lubricants, Inc.

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Bio-Rock Drill™ Oils

"Biobased Lubricants that Perform Like Synthetics"

Bio-Rock Drill™ Oils are ultimately biodegradable¹ vegetable oils formulated with Antiwear/EP, rust and oxidation inhibitors for the protection of pneumatic equipment. They are designed to emulsify water for improved lubricity in moist conditions and provide extra adhesiveness and anti-misting. Performance is enhanced by use of the Stabilized HOBS's natural composition, which provides an oily boundary film. The super high viscosity index of the Stabilized HOBS naturally improves the high temperature shear stability and fluid film strength between metal surfaces. These (Biopreferredsm,) products have shown to provide exceptional protection in equipment subject to extreme heavy shock loads and excessive moisture or water spray. These biobased products have exceptional benefits over petroleum-based lubricants because there is direct danger of polluting the air, water, soil, or work environment through loss of the lubricant.

Bio-Rock Drill™ Oils meet the Environmental Protection Agency (EPA) 2013 Vessel General Permit (VGP) guidelines for Environmentally Acceptable Lubricants (EALs), and should be used where **LOW TOXICITY**, **BIODEGRADABILITY** and **NON-BIOACUMMULATION** properties are required. They exceed the acute toxicity (LC-50/EC-50 >1000 ppm) criteria adopted by the US Fish and Wildlife Service and the US EPA. Bio-Rock Drill™ Oils are **ENVIRONMENTALLY RESPONSIBLE** lubricants that are formulated from renewable agricultural plant resources. We believe Earth's environmental future rests in the use of renewable material.

¹Ultimate Biodegradation (Pw1) within 28 days in ASTM D-5864 Aerobic Aquatic Biodegradation of Lubricants

Typical Specifications

	ASTM	Medium 10W20	Heavy Medium 10W30	Heavy 15W50	Extreme Heavy 20W60
<u>SAE Viscosity Grade</u>					
ISO Viscosity Grade		46	68	100	150
VISCOSITIES:	D-445				
@100°C., cSt.		8.65	12.0	18.2	26.1
@40°C., cSt.		43.74	62.9	95	147
Viscosity Index	D-2270	181	191	212	213
Flash Point, COC, °C	D-92	260	272	288	290
Pour Point, °C	D-97	-36	-33	-30	-24
Copper Strip Corrosion (3h@100°C)	D-130	1A	1A	1A	1A
4-Ball Wear (mm)	D-4172	0.30	0.30	0.30	0.30
4-Ball EP	D-2783				
Weld Point (kg)		250	250	250	250
Load Wear Index		47.86	47.86	47.86	47.86
Timken Load, OK Load (lbs)	D-2782	70	70	70	70
Rust Prevention	D-665				
A-Distilled water		Pass	Pass	Pass	Pass
B-Syn. Sea water		Pass	Pass	Pass	Pass
RLI Product Item #		83000	83010	83020	83030

Applications

1. Excellent recommendation for rock drills, jackhammers, and other pneumatic tools
2. Also used as EP gear lubes (API GL-3), steam cylinder oils, way lubricants and non-drip oils

STABILIZED by Renewable Lubricants* is RLI's trademark on their proprietary and patented anti-oxidant, anti-wear, and cold flow technology. High Oleic Base Stock (HOBS) are agricultural vegetable oils. This Stabilized technology allows the HOBS to perform as a high performance formula in high and low temperature applications, reducing oil thickening and deposits. Patented Product: US Patent 6,383,992, US Patent 6,534,454 with additional Pending and Foreign Patents

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Availability **F.O.B. :Hartville, Ohio, USA** **1 Gallon** **5 Gallon Pail** **Drum** **Totes** **Bulk**