



# Renewable Lubricants, Inc.

476 Griggy Rd., P.O. Box 474

Hartville, Ohio 44632-0474

Voice: 330.877.9982 Fax 330.877.2266

Web: www.renewablelube.com

## Bio-Chain & Cable™ Lubricants



### *"Biobased Lubricants that Perform Like Synthetics"*

Bio-Chain & Cable™ Lubricants are ultimately biodegradable<sup>1</sup> vegetable oils formulated with Antiwear/EP, rust/corrosion and oxidation inhibitors, and a tackifier. Bio-Chain & Cable™ Lubricants are designed to provide multi-metal corrosion protection and recommended for heavy chains, sprockets, and cables, which are subject to heavy loading or shock loading. These biobased products provide improved fire resistance over equal viscosity petroleum products and contain no chlorine, zinc, or heavy metals. Performance is enhanced by use of the Stabilized HOBS's natural vegetable oil composition, which provides an oily boundary film. In addition, this oily film has a natural polarity to metal surfaces and helps clean and then penetrates deep into the inner core of the cable or chain link, preventing corrosion and wear. The super high viscosity index of the Stabilized HOBS adds additional lubrication qualities to this high performance lubricant. Laboratory and field tests have shown that the products provide exceptional equipment protection with excellent cold temperature pumpability.

**Applications:** Forestry, Mining, Marine, Agriculture, Heavy Industry, Rail and Shipping, Pulp and paper mills, saw mills, plywood mills, hoist cables and chains in marine shipping areas, draglines, drives on straddle lift lumber carriers, drip and automatic chain oilers, motorcycle and ATV chains, etc. Field applications can be applied by spray, brush, dip, drip, or pressure boot.

Bio-Chain & Cable™ Lubricants 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-BIOACCUMULATION** 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-Chain & Cable™ Lubricants are **ENVIRONMENTALLY RESPONSIBLE** lubricants that are formulated from renewable agricultural biobased resources. We believe Earth's environmental future rests in the use of renewable materials.

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

#### Typical Specifications

	ASTM	Medium	Heavy Med	Heavy	Extreme Heavy
<b>ISO Viscosity Grade</b>		<b>46</b>	<b>68</b>	<b>100</b>	<b>150</b>
SAE Viscosity Grade Replacement		10W20	10W30	15W50	20W60
VISCOSITIES:	D-445				
@100°C., cSt.		8.65	12	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	245	262	278	285
Pour Point, °C	D-97	-36	-33	-30	-26
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)		400	400	400	400
Load Wear Index		55	55	55	55
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
<b>RLI Product Item #</b>		<b>83050</b>	<b>83060</b>	<b>83070</b>	<b>83080</b>

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**