



Biodegradable
Recyclable

United Bio Lube

Enabling Compliance with White House Executive Orders
13101, 13123, 13134, 13148, 13149

Sustainable
Renewable



Contact: Jeffrey S. Marth
Email: jMarth@UnitedBioLube.us

www.UnitedBioLube.us

Phone: (650) 213 - 9979
Fax: (650) 223 - 0305

A Green Chemistry Company

Enabling U.S. Oil Independence



2004

Bio Food Grade Greases Gear Up to Replace Traditional Petroleum- based Synthetics!

Soy-based lubricants continue to successfully compete with traditional petroleum based oils and greases in the marketplace. **Renewable Lubricants, Inc. (RLI)**, has partnered with the **United Soybean Board (USB)** to develop transportation and industrial lubricants that are now being used in many commercial and government markets. From this technology, RLI has also produced several **Bio Food Grade Lubricants** that are used with machinery in the food processing and packaging industries. At this time, most of the interest in food grade products has come from Pacific Rim markets.



Through checkoff-funded efforts, RLI has successfully created several food-grade lubricants that have been tested through independent laboratories and are making significant strides in terms of industry use. These food-grade lubricants include hydraulic fluids, gear oils, aluminum cutting oils, air tool oils, penetrant/corrosion inhibitors and E.P. greases. Three important greases of note are RLI's **Bio Food Grade Extreme Pressure (E.P.) Grease NLGI #2, #1, and #0.**

Bio Food Grade E.P. greases are engineered specifically for incidental food contact (**USDA H-1**) in the food processing and packaging markets. These state-of-the-art lubricants provide excellent oxidation stability and demonstrate exceptional performance under extreme pressure and wear, with significant resistance to corrosion. The advantages of biobased stocks like soybean are many: they are biodegradable and renewable, they have low toxicity and low volatility, they perform under multiple conditions and they help secure the American economy.

"Food Grade is a niche market that can have a great impact on the biobased market, because most all food-grade lubricants are not renewable and biobased," according to Bill Garmier, Vice President of Renewable Lubricants, Inc.

Bio Food Grade E.P. NLGI #2, #1 and #0 greases are high temperature lubricants that demonstrate high resistance to water and mechanical shear. NLGI #1 and #0 may be used as open or enclosed gear greases. Bio Food Grade E.P. NLGI #2, #1 and #0 have a neutral odor and are streak-free by design. These white greases provide excellent performance qualities, good adhesion and cohesion properties, and they are zinc-free.

Garmier also advocates that RLI's Bio Food Grade Greases contain a highly stabilized patented technology that allows the high oleic vegetable-base stocks to perform in high and low temperature applications, reducing oil thickening and deposits. This biotechnology has shown in the Bomb Oxidation test (ASTM D-942) that it provides oxidation stability equal to or better than conventional petroleum oil grease formulations. It also shows excellent cold temperature mobility in the U.S. Steel test method.

The **Soybean Checkoff** is active in producing mid- and high-oleic soybean oils as lubricant base stocks. USB is made up of 62 farmer-directors who oversee the investments of the Soybean Checkoff on behalf of all U.S. soybean farmers. As stipulated in the **Soybean Promotion, Research and Consumer Information Act, USDA's Agricultural Marketing Service** has oversight responsibilities for USB and the soybean checkoff.

For more information on RLI's food grade greases, please visit ***www.UnitedBioLube.us*** or phone (650) 213-9979.

To learn more about soy-based lubricants please visit USB's Soy Products Guide at ***www.UnitedSoybean.org***.

Copyright 1998-2004 United Soybean Board

**United Soybean Board
16640 Chesterfield Grove Road, Suite 130, Chesterfield, MO
63005
800-989-USB1 (8721)**



**For assistance, please call (650) 213
- 9979**

Copyright © 2007 United Bio Lube All rights reserved.

