



Innovative New Uses for Soy

Reduce Wear on Metal with Soy-Based Lubricants



If you are looking to protect metal parts from wear and tear, and use an environmentally friendly product to do so, the United Soybean Board (USB) and soybean checkoff have worked with industry to meet your needs. NatureLube 700, made by BioPlastic Polymers and Composites, is an organization receiving checkoff support which has developed a product displaying superior metal wetting properties and improved film strength to provide lubricity and reduce wear of vital metal parts.

NatureLube 700 is a soy-based lubricant that is suitable as a base for rust and corrosion preventive formulations to protect metals against the corrosive effects of salt spray, moisture and weather. According to BioPlastic Polymers and Composites, the lubricant has been engineered

to have thermal and oxidative stability. The oxidative stability of NatureLube 700 is similar to high performance synthetic lubricants, unlike other biobased fluids and lubricants that contain fatty acids and their esters.

Coefficient of friction is considered a critical property for lubricating oils, and test results indicate NatureLube 700 has exceptionally low values of the friction coefficient under heavy loads, which is favorable. Tests performed by an independent laboratory showed that NatureLube 700 has not only oxidation stability, but low-temperature flow response in addition to the inherent lubrication properties of natural oils.

The results of a Thermo-Oxidation Engine Oil Simulation (TOES) showed a total of only 7.8 milligrams of deposits. For comparison, 35 mg deposit is the maximum permitted for modern GF-4 engine oil. Regular soybean oil gives around 1590 mgs of deposit.

NatureLube 700 delivers additional benefits, including leaving a thin protective film, being biodegradable, food-grade, cost effective and easy to use, transport and store.

"NatureLube 700 is acceptable as a lubricant with incidental food contact, for use in and around food processing areas," says Ken Farminer of BioPlastic Polymers and Composites.

To learn more about NatureLube 700, visit www.bioplasticpolymers.com. For more information on USB support for soy technology, visit www.unitedsoybean.org/newuses.

USB is made up of 64 farmer-directors who oversee the investments of the soybean checkoff on behalf of all U.S. soybean farmers. Checkoff funds are invested in the areas of animal utilization, human utilization, industrial utilization, industry relations, market access and supply. 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.