



# Renewable Lubricants, Inc.

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## **Bio-SynXtra™ Super Viscosity EHD-MW** (Super Viscosity Extra Heavy Duty Metal Working Oils)



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

Bio-SynXtra™ Super Viscosity EHD-MW oils are biodegradable<sup>1</sup>, biobased metal working oils formulated from Super High Viscosity natural and synthetic esters for extra heavy duty metal working operations. Their color can be classified as transparent, which permits viewing the cutting operations while in process and they are formulated to reduce smoke and mist. Performance is enhanced by use of the Stabilized HOBS's, natural fatty acid composition, which provides tool wetting and oiliness; combined with exceptional extreme pressure (EP) and antiwear technology. The super high viscosity index of the Stabilized HOBS and synthetic base stocks adds additional load carrying properties and corrosion protection.

These (Biopreferred<sup>sm</sup>.) products do not contain active sulfur, chlorine, zinc, phosphorus, silicon, or heavy metals, and do not produce an abrasive odor. They are non-staining to yellow metals and may be used for machining both ferrous and non-ferrous metal alloys. These operations include: Extra Heavy Duty and/or low speed stamping, drawing, milling, drilling, turning, grinding, shaving, sawing, broaching, thread cutting, and tapping. In addition, these oils are particularly useful for working stainless and hard steel, such as Hastalloy and tool steels. More specific Extra Heavy Duty applications include steel and stainless steel wire drawing, deep drawing, and cold heading (match heavy viscosities and EP performance below to equipment and application requirements).

The advantages are many: biodegradable, renewable, low toxicity, no hazardous volatile organic compounds (VOC), more fire resistant, safer, EPA and ISO 14000 compliant, reduces foreign oil, and helps secure the American Economy, OSHA and worker acceptance is high with biobased oils.

Bio-SynXtra™ Super Viscosity EHD-MW 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 materials.

### **Typical Specifications**

<b>ISO Grades</b>	<b>150</b>	<b>220</b>	<b>460</b>
Specific Gravity @60°F.	.95	.96	.96
VISCOSITIES: @100°C., cSt.	25	35	60
@40°C., cSt.	143	211	430
Viscosity Index	210	215	212
Flash Point, COC °C	290	290	290
Pour Point, °C	-12	-10	-4
Copper Corrosion ASTM D-130	1B	1B	1B
Rust Prevention ASTM D-665 A&B	No Rust	No Rust	No Rust
4-Ball EP Weld Pt. ASTM D-2783 (kg)	>800	>800	>800
<b>Product Item #</b>	<b>88170</b>	<b>88180</b>	<b>88190</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.

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

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**