



Renewable Lubricants, Inc.

476 Griggy Rd., P.O. Box 474
 Hartville, Ohio 44632-0474
 330.877.9982 Fax 330.877.2266
 Web: www.renewablelube.com

Bio-E.P. Gear™ Oils



"Biobased Lubricants that Perform Like Synthetics"

Bio-E.P. Gear™ Oils are designed to meet and exceeds the U.S. Steel 224, AGMA 9005/250.04, DIN 51517, Part 3, David Brown DB S1.53.101, and Cincinnati Machine E.P. performance requirements. Bio-E.P. Gear™ Oils are recommended for lubricating spur, helical, bevel, and worm gear configurations which are subject to heavy loading or shock loading and are designed for heavy-duty applications. The formulas have combined energy conserving Stabilized HOBS technology with synthetic base stocks and mild E.P./antiwear additives. The result is an ultimately biodegradable¹ product which has the long life heat stability but which additionally offers the protection advantages of increased gear life through extremely high film strength during operating temperatures. Bio-E.P. Gear™ 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.

Typical Specifications

		Light	Medium-Light	Medium	Heavy Medium	Heavy	Extra-Heavy
Industrial Grade Replacement							
ISO grade Replacement	46	68	100	150	220	320	460
AGMA Replacement	E.P. 1	E.P. 2	E.P. 3	E.P. 4	E.P. 5	E.P. 6	E.P. 7
API Gravity @ 60°F. (D-287)	28.90	27.50	25.2	25.7	25.2	25.3	24.3
Pounds/Gallon @ 60°F.	7.35	7.42	7.53	7.55	7.53	7.52	7.56
Specific Gravity @60°F. (D-287)	0.882	0.890	0.903	0.90	0.903	0.90	0.908
VISCOSITIES:							
@100°C., cSt. (D-445)	8.26	11.84	14.5	20	24.1	34	49
@40°C., cSt. (D-445)	41.73	65.37	86.3	131	166	252	382
Viscosity Index (D-2270)	178	179	175	175	177	182	194
Flash Point, COC, °C (D-92)	260	272	288	288	280	280	280
Pour Point, °C (D-97)	-34	-30	-25	-22	-20	-18	-12
Copper Corrosion 3hr @ 100°C (D-130)	1A	1A	1A	1A	1A	1A	1A
4-Ball Wear (D-4172)	.30	.30	.30	.30	.30	.30	.30
4-Ball EP Weld Point (kg)	250	250	250	250	250	250	250
4-Ball EP Load Wear Index	47.86	47.86	47.86	47.86	47.86	47.86	47.86
FZG Test (DIN 51517)	12	12	12	12	12	12	12
Demulsibility (D-2711)	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Foam Sequence I, II, III (D-892)	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Rust Prevention (D-665)	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Timken Load, OK Load (lbs) (D-2782)	70	70	70	70	70	70	70
Biodegradation classification	Ultimate	Ultimate	Ultimate	Ultimate	Ultimate	Inherent	Inherent

Features

- (1) Energy Conserving Formulas (Because of the super high viscosity index (VI) of the Stabilized HOBS these products are lighter therefore more energy efficient at room temperatures up to 40 C but provide a more protective heavier viscosity than mineral based formulas at operating temperatures of 60 C and above)
- (2) Super high viscosity index provides wider temperature performance
- (3) Fortified with additives to resist wear, oxidation, rust and foam
- (4) More fire resistant and improved heat dissipation

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.

¹ 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

* Trademark of Renewable Lubricants, Inc.
 Copyright 1999 Renewable Lubricants, Inc.

Availability **F.O.B. :Hartville, Ohio, USA** **5 Gallon Pails** **Drums** **Bulk**