Renewable Lubricants, Inc.
476 Griggy Rd., P.O. Box 474
Hartville, Ohio 44632-0474

Bio-Food Grade™ Gear Oil

(ISO 32, 46, 68, 100, 150, 220, 320, 460, 680)

NSF H1, H2 Registered

Bio-Food Grade™ Gear Oils are biosynthetic and biodegradable lubricants formulated for gear drives and right-angle gear reducers commonly used in food processing, agriculture, marine, water treatment, and environmentally sensitive areas. These fluids meet USDA H1 criteria for incidental food contact and are fortified with food-grade antiwear and mild EP additives. They provide superior oxidation stability, corrosion resistance, and excellent demulsibility. Stabilized™ High Oleic Base Stocks (HOBS) offer a super high viscosity index, resulting in energy-conserving formulas with superior thermal shear stability and wear protection. These lubricants are suitable replacements for API GL-1, GL-2, GL-3, AGMA Mild-EP, and DIN 51517 Part 3 specifications.

Benefits

- NSF Registered for H1 and H2 (incidental food contact)
- Meets DOD-L-24651 Military Specification (Types I & II for ISO 32–220)
- Yellow metal friendly
- High flash/fire points and superior thermal stability
- Passes ASTM D-665 A & B for rust protection
- Excellent demulsibility (ASTM D-2711 – 40/40/0)
- Superior 4-ball wear and EP performance (Load Wear Index = 47, Weld = 200kg)
- USDA Biopreferred Certified
- Compatible with petroleum seals and filters
- Kosher Certified, free of animal byproducts
- EPA VGP 2013 EAL compliant (ISO 32–150)
- Non-toxic (LC-50/EC-50 >1000 ppm)

Application / New Filling

- Recommended for:
  - Food processing gear drives (right angle, reduction units)
  - Agricultural and marine equipment
  - Water treatment facilities
    - Compatible with R&O and ashless antiwear systems
    - Not recommended for hypoid gears requiring extreme pressure (EP) lubricants
    - Contact RLI for guidance on flushing and equipment conversions

Specifications and Approvals

- NSF H1 Registered
- DIN 51517 Part 3
- AGMA Mild-EP
- API GL-1, GL-2, GL-3
- Military Spec DOD-L-24651 (ISO 32, 46, 68, 220)
- ISO 32–150: Readily Biodegradable (>60% in 28 days)
- ISO 220–680: Inherent Biodegradable

F.O.B: Hartville, Ohio
Availability: 1 Gallon, 5 Gallon Pail, 55 Gal Drum, Totes, Bulk

STABILIZED™ by Renewable Lubricants

TYPICAL SPECIFICATIONS

ISO grade Replacement	**32**	**46**	**68**	**100**	**150**	**220**	**320**	**460**	**680**
AGMA Replacement	**N/A**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
ASTM Grade	**150**	**215**	**315**	**465**	**700**	**1000**	**1500**	**2500**	**3000**
VISCOSITIES:									
@100^{O}C., cSt. (D-445)	7.0	9.3	13.3	20.0	27.0	37.1	48.4	62.8	84
@40^{O}C., cSt. (D-445)	31.6	45.0	65.4	97.9	142.0	212.5	306.8	442.5	640
Viscosity Index (D-2270)	193	196	210	229	228	226	221	216	219
Flash Point, COC, ^{O}C (D-92)	230	241	249	257	264	270	273	275	275
Pour Point, ^{O}C (D-97)	-40	-38	-33	-31	-27	-25	-22	-20	-18
Copper Corrosion 3hr @ 100^{O}C (D130)	1A	1A	1A	1A	1A	1A	1A	1A	1A
Acid Number (D-974)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
4-Ball Wear (D-4172)	.35	.35	.35	.35	.35	.35	.35	.35	.35
4-Ball EP Weld Point (kg)	200	200	200	200	200	200	200	200	200
4-Ball EP Load Wear Index	47	47	47	47	47	47	47	47	47
FZG A/8.3/90 (DIN 51354 Part 2)	11	12	12	12	12	12	12	12	12
Demulsibility (D-2711)	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0
Foam Sequence I, II, III (D-892)	< 30/0 Foam	< 30/0 Foam	< 30/0 Foam	< 30/0 Foam	< 30/0 Foam	< 30/0 Foam	< 30/0 Foam	< 30/0 Foam	< 30/0 Foam
Rust Prevention (D-665 A&B)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Dielectric Strength, kV (D-877)	>45	>45	>45	>45	>45	>45	>45	>45	>45
RPVOT Oxidation Stability (D-2272), Minutes	>250	>250	>250	>250	>250	>250	>250	>250	>250
Biodegradation Classification	Readily	Readily	Readily	Readily	Readily	Inherent	Inherent	Inherent	Inherent
Meets US EPA VGP	Yes	Yes	Yes	Yes	Yes	No	No	No	No
RLI Product Item #	87200	87210	87220	87230	87240	87250	87260	87270	87280
NSF REGISTRATION #		ISO 46 140401 H1			ISO 150 140441 H1	ISO 220 140442 H1	ISO 320 140443 H1		