

Bio-SynXtra™ FG Compressor Oils

(ISO 32, 46, 68, 100, 150, 220)

Biobased Food Grade (H1) Synthetic-Blend Lubricants for Compressors, Hydraulics, and Gears

Bio-SynXtra™ FG Compressor Oils are multi-purpose, food grade (H1), synthetic lubricants designed to deliver exceptional lubrication and protection across a wide range of equipment. These fluids are formulated with biobased synthetic esters and GRAS (Generally Regarded as Safe) ingredients for safe use in food processing environments. They meet USDA H1 and FDA 21 CFR 178.3570 requirements, while providing superior performance in rotary and reciprocating compressors, vacuum pumps, gearboxes, and hydraulic systems.

Benefits

- Meets USDA H1 and FDA 21 CFR 178.3570 requirements for incidental food contact
- Readily biodegradable, environmentally non-toxic, not bioaccumulative
- Reduced fire and explosion risk in sensitive environments
- Excellent oxidation and thermal stability (TOST > 12,000 hours)
- Outstanding demulsibility and rust protection
- Zinc-free and ashless additive system
- High viscosity index and low pour point for broad temperature performance
- Low varnish formation and deposit control
- Compatible with fluorocarbon, Viton®, HNBR, Teflon®, and other robust elastomers
- Kosher-certified and free from animal byproducts

Application / New Filling

Primary Applications:

- Rotary and reciprocating compressors (single, two-stage, and multistage)
- Centrifugal compressors, vacuum pumps, and heat pumps
- Hydraulic systems (vane, piston, gear-type)
- Gear drives, roller chains, drip oilers, machine oil circulation, and general plant lubrication

Performance Specifications:

- ISO Grades 32, 46, 68: Recommended for rotary compressors
- ISO Grades 100, 150, 220: Ideal for reciprocating compressors and heavy-duty gear use



- Meets or exceeds:
 - **DIN 51506 VDL**
 - **Denison HF-O, HF-1, Vickers M-2950-S, I-286-S**
 - **Rexroth, US Steel 126, 127, 136**
 - **AGMA Mild EP and Non-EP, DIN 51517 Part 3, DIN 51524 Part 2 & 3**
 - **Military Spec DOD-L-24651 (Types I & II)**

Specifications and Approvals

- MIL-SPEC DOD-L-24651 Types I (ISO 32, 46, 68) and II (ISO 220)
- Stabilized™ HOBS Technology (U.S. Patents: 6,383,992; 6,534,454)
- Kosher-certified and suitable for halal-compliant operations



Typical Specifications

ISO Grade	32	46	68	100	150	220
VISCOSITIES:						
@100°C., cSt. (D-445)	5.9	7.9	11	14.9	20.2	26.9
@40°C., cSt. (D-445)	29.5	43.5	66	97	142	205
Viscosity Index (D-2270)	149	155	159	161	165	167
Flash Point, COC, °C (D-92)	232	240	245	255	258	264
Pour Point, °C (D-97)	-48	-44	-42	-40	-38	-36
Copper Corrosion 3hr @ 100°C (D-130)	1A	1A	1A	1A	1A	1A
Acid Number (D-974)	1.2	1.2	1.2	1.2	1.2	1.2
4-Ball Wear, mm (D-4172)	.35	.33	.33	.33	.33	.33
4-Ball EP Weld Point (kg)	200	200	200	200	200	200
4-Ball EP Load Wear Index	47	50	50	50	50	50
FZG Test A/8.3/90 (DIN 51354 Part 2)	11	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
Foam Sequence I, II, III (D-892)	0 Foam	0 Foam	0 Foam	0 Foam	0 Foam	0 Foam
Rust Prevention (D-665 A & B)	Pass	Pass	Pass	Pass	Pass	Pass
TOST (ASTM-943 Hrs. 2.0 NNA)	12,000+	12,000+	12,000+	12,000+	12,000+	12,000+
Dielectric Strength, kV (D-877)	>40	>40	>40	>40	>40	>40
RLI Product Item #	87930	87940	87950	87960	87970	87980