

Bio-SynXtra™ Super FG Compressor Oils

(ISO 15, 22, 32, 46, 68, 100, 150, 220)

Biobased Synthetic Food Grade H1 Compressor Oils

Bio-SynXtra™ Super FG Compressor Oils are biosynthetic, multi-application lubricants formulated for food processing and industrial equipment. These readily biodegradable lubricants contain ingredients “Generally Regarded as Safe” (GRAS) and meet USDA H1 requirements for incidental food contact. Developed with biobased synthetic esters, these oils provide outstanding oxidation stability, antiwear performance, and corrosion resistance—ensuring superior service life and reduced maintenance in compressors, hydraulics, and gear systems.

Benefits

- Readily biodegradable, environmentally non-toxic, not bioaccumulative
- Food Grade H1 and GRAS-compliant (21 CFR 178.3570)
- Superior oxidation and thermal stability for extended service life
- Excellent antiwear, demulsibility, and rust protection
- Low pour point and high viscosity index
- Reduced fire and explosion risk
- Low varnish-forming tendencies
- Zinc-free, non-toxic, and eco-friendly formulation
- Kosher supervised; no animal byproducts
- Ultimate Biodegradability (Pw1 >60% in 28 days per ASTM D-5864)
- Exceeds EPA Vessel General Permit (VGP) standards for EALs

Application / New Filling

Compressors and Vacuum Pumps:

Ideal for rotary screw, sliding vane, reciprocating (air/water-cooled), centrifugal compressors, and vacuum pumps. ISO 32, 46, and 68 grades commonly used for rotary compressors; higher grades preferred in reciprocating units. Meets DIN 51506 VDL.

Hydraulic & Gear Systems:

Zinc-free formula meets Denison HF-0, Vickers M-2950-S and I-286-S, Rexroth, US Steel 126/136/127, DIN 51524 Parts 1–3, and AGMA Mild EP requirements. Compatible with R&O lubricants.

Multi-Use Applications:

Hydraulic systems, EP turbine oils, gear drives, bearings, air tools, roller chains, cables, drip oilers, circulating systems, machine oil, and general lubrication.

Elastomer Compatibility:

Recommended for Viton, fluorosilicone, Teflon, HNBR, and high nitrile Buna-N. Not recommended with neoprene, SBR, natural rubber, polyethylene, polyacrylate, or low Buna-N.

Specifications and Approvals

- H1 compliant for incidental food contact
- Meets DOD-L-24651 Type I and II (U.S. Military Food Grade specification)
- FZG A/8.3/90 load stage: 11–12
- TOST life: 12,000+ hours (ASTM D-943)
- Meets EPA 2013 VGP requirements for EALs
- Exceeds acute toxicity standards of US Fish & Wildlife and EPA



Typical Specifications

ISO Grade	15	22	32	46	68	100	150	220
VISCOSITIES:								
@100°C., cSt. (D-445)	3.8	4.6	5.8	7.6	10	13.9	17.8	24
@40°C., cSt. (D-445)	15.9	21.1	29.9	43.9	64	99	137	205
Viscosity Index (D-2270)	134	138	140	141	141	142	144	145
Flash Point, COC, °C (D-92)	234	250	259	264	265	268	270	270
Pour Point, °C (D-97)	-60	-57	-55	-54	-51	-49	-46	-43
Copper Corrosion 3hr @ 100°C (D130)	1A	1A	1A	1A	1A	1A	1A	1A
Acid Number (D-974)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
4-Ball Wear, mm (D-4172)	.35	.34	.34	.33	.32	.33	.33	.33
4-Ball EP Weld Point (kg)	160	160	200	200	200	200	200	200
4-Ball EP Load Wear Index	47	47	47	50	50	50	50	50
FZG Test A/8,3/90 (DIN 51354 Part 2)	11	11	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
Foam Sequence I, II, III (D-892)	0 Foam	0 Foam	0 Foam	0 Foam	0 Foam	0 Foam	0 Foam	0 Foam
Rust Prevention (D-665 A & B)	Pass	Pass	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+	12,000+	12,000+
Dielectric Strength, kV (D-877)	>40	>40	>40	>40	>40	>40	>40	>40
RLI Product Item #	87710	87720	87730	87740	87750	87760	87770	87780