

FS Synthetic EP Industrial Gear Oil

Description

FS Synthetic EP Industrial Gear Oils are formulated with full synthetic base oils and built with an extreme pressure additive system to provide excellent resistance to scuffing wear and micro-pitting fatigue on industrial gears and bearings operating under extreme pressures and shock loads. These oils are designed for heavy-duty industrial gear drives that require EP protection, including bevel, herringbone, planetary, and spur.

Features and Benefits:

- Proven EP protection against scuffing and micro-pitting wear.
 - High viscosity index provides reliable cold-temperature startup lubrication and efficiency.
 - Exceeds a wide range of performance specification for convenience and versatility.
 - Excellent oxidation resistance to reduce sludge, carbon, and varnish deposits for superior cleanliness.
 - Superior foam resistance.
 - Excellent viscosity retention at high temperatures.
 - Rust and corrosion protection to promote long life.
- *Consult equipment operation manual for viscosity grade recommendations.*

Approvals:

Specification	ISO 68	ISO 100	ISO 150	ISO 220	ISO 320	ISO 460	ISO 680
AGMA 250.04	-	X	X	X	X	-	-
AGMA 9005-E02	X	X	X	X	X	X	X
DIN 51517 Part 3 CLP	X	X	X	X	X	X	X
ISO 12925-1 Type CKD	-	-	X	X	X	X	X
Cincinnati Machine	X	X	X	X	X	X	X
David Brown S1.53.101 Type E	X	X	X	X	X	X	X
US Steel/AIST 224	X	X	X	X	X	X	X

Typical Properties:

Description	Test	ISO Viscosity Grade						
		68	100	150	220	320	460	680
ISO Viscosity Grade	ASTM D2422	68	100	150	220	320	460	680
Synthetic Gear Oil Classification	AGMA	2EP	3EP	4EP	5EP	6EP	7EP	8EP
Kinematic Viscosity @ 100°C, cSt	ASTM D445	11.7	14.8	19.6	27.0	36.1	49.6	75.4
Kinematic Viscosity @ 40°C, cSt	ASTM D445	73.2	101.3	147.5	220.3	322.7	454	680.6
Viscosity Index	ASTM D2270	155	151	152	157	158	170	192
Four-Ball Weld Point, kgf	ASTM D2783	250	250	250	250	250	250	250
Four-Ball Load Wear Index, kgf	ASTM D2783	45	52	55	56	59	54	55
Falex B (Failure), LbF	ASTM D3233	3000	3000	3250	3250	3250	3750	3750
Timken OK Load, LbF	ASTM D2782	>90	>90	>90	>90	>90	>90	>90
Foam Characteristics, Seq. I	ASTM D892	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Seq. II		10/0	10/0	10/0	10/0	0/0	10/0	30/0
Seq. III		0/0	0/0	0/0	0/0	0/0	0/0	0/0
Copper Corrosion 121°C, 3 hr	ASTM D130	1B	1B	1B	1B	1B	1B	1B
Micro-pitting @ 90°C, Load Stage	FVA 54	-	-	>10	>10	>10	>10	>10
GFT Class	FVA 54	-	-	High	High	High	High	High
FZG Failure Stage (A/8, 3/90)	-	>12	>12	>12	>12	>12	>12	>12
FZG Failure Stage (A/16, 6/90)	-	-	-	>12	>12	>12	>12	>12
FAG FE-8 Bearing Wear Test	DIN 51819-3	-	-	Pass	Pass	Pass	Pass	Pass
Air Release @ 50°C, min.	ASTM D3427	-	-	28.1	-	-	-	-
Air Release @ 90°C, min.	ASTM D3427	-	-	-	8.7	9.5	11.4	-
Flash Point, COC °C (°F)	ASTM D92	238 (460)	238 (460)	238 (460)	240 (464)	244 (471)	246 (475)	254 (489)
Pour Point °C (°F)	ASTM D97	-52 (-62)	-50 (-58)	-45 (-49)	-42 (-44)	-40 (-40)	-35 (-31)	-33 (-27)

FS Synthetic EP Industrial Gear Oils are compatible with mineral oils and other synthetic lubricants, always review your equipment manufacturer requirements to confirm compatibility. Thorough flushing is required prior to changeover from polyalkylene glycol (PAG) oils.

- Not recommended for use with yellow metals (copper, brass, bronze) above 100°C (212°F) without testing in the application.
- Not recommended for automotive hypoid gears.
- Not compatible with polyalkylene glycol (PAG) gear oils.

Product Availability:

- Contact your local FS Energy Specialist for package size availability and pricing; most grades are available in pails, drums, and totes.