

# FS Industrial Gear Lubricant EP

## ISO 68, 100, 150, 220, 320, 460, & 680

### Description

FS Industrial Gear Lubricants are premium-quality oils formulated with high-viscosity-index base oils and a premium sulfur/phosphorus extreme pressure (EP) additive package. They are recommended for industrial enclosed gearing applications, including bevel, herringbone, spur and some worm gears, and wherever an AGMA extreme pressure lubricant is specified.

FS Industrial Gear Lubricants, in the proper viscosity grades, are recommended for all oil mist application systems. The same products can also be used in general plant lubrication where the performance properties of this type of lubricant are required.

Always check owner's manual for proper recommendation.

### Features and Benefits:

- Exceptional EP protection and film strength
- Improved rust and corrosion protection
- Strong demulsibility for fast water separation
- Excellent oxidation and thermal stability
- Superior foam resistance
- Good seal compatibility characteristics – controls swelling, hardening, and cracking

### Meets or Exceeds:

- Cincinnati Machine P-63 (ISO 68), P-77 (ISO 150), P-74 (ISO 220), P-59 (ISO 320), P-35 (ISO 460)
- US Steel 224 (ISO 68, 150, 220, 320)
- DIN 51517 Part 3 CLP

### Product Availability:

FS INDUSTRIAL GEAR OIL 68			
Package Size	Item Number	Package Size	Item Number
5 Gal. Pail	47475	265-gal. Totes	47477
55-gal. Drum	47476	Bulk	47478

FS INDUSTRIAL GEAR OIL 320			
Package Size	Item Number	Package Size	Item Number
5 Gal. Pail	155435	265-gal. Totes	218877
55-gal. Drum	155436	Bulk	200415

FS INDUSTRIAL GEAR OIL 100			
Package Size	Item Number	Package Size	Item Number
5 Gal. Pail	47479	265-gal. Totes	47481
55-gal. Drum	47480	Bulk	47482

FS INDUSTRIAL GEAR OIL 460			
Package Size	Item Number	Package Size	Item Number
5 Gal. Pail	155437	Bulk	188419
55-gal. Drum	155438		

FS INDUSTRIAL GEAR OIL 150			
Package Size	Item Number	Package Size	Item Number
5 Gal. Pail	47483	265-gal. Totes	47485
55-gal. Drum	47484	Bulk	47486

FS INDUSTRIAL GEAR OIL 680			
Package Size	Item Number	Package Size	Item Number
5 Gal. Pail	166014	Bulk	269543
55-gal. Drum	166015		

FS INDUSTRIAL GEAR OIL 220			
Package Size	Item Number	Package Size	Item Number
5 Gal. Pail	47487	265-gal. Totes	47489
55-gal. Drum	47488	Bulk	47490



## Typical Properties:

Test / Description	Method							
<b>ISO Viscosity Grade</b>		<b>68</b>	<b>100</b>	<b>150</b>	<b>220</b>	<b>320</b>	<b>460</b>	<b>680</b>
<b>Viscosity @ 100°C (cSt)</b>	ASTM D445	8.5	11.4	14.5	18.7	24.0	30.4	44.2
<b>Viscosity @ 40°C (cSt)</b>	ASTM D445	68.0	100.0	150.0	220.0	320.0	460.0	680.0
<b>Viscosity Index</b>		94	100	94	95	95	95	110
<b>Density (lb/gal)</b>	ASTM D4052	7.30	7.37	7.40	7.44	7.46	7.53	7.49
<b>Pour Point °C/°F</b>	ASTM D97-06	-27/-17	-15/5	-15/5	-9/16	-9/16	-6/21	-6/21
<b>Flash Point °C/°F</b>	ASTM D92	200/392	205/401	210/410	215/419	220/428	230/446	235/455
<b>Four Ball Weld Point, kgf</b>	ASTM D2783	250	250	250	250	250	250	250
<b>Timken OK Load Test, lbs.</b>	ASTM D2509	65	65	65	65	65	65	65
<b>FZG Load Stage Pass</b>	ASTM D5182	>12	>12	>12	>12	>12	>12	>12
<b>Rust Test</b>	ASTM D665	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<b>Copper Corrosion</b>	ASTM D130	1b	1b	1b	1b	1b	1b	1b
<b>AGMA Grade</b>		2EP	3EP	4EP	5EP	6EP	7EP	8EP