



OUR BUSINESS IS HEAVY DUTY LUBRICANTS

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PRODUCT SPECIFICATIONS & TECHNICAL DATA

PETROFLO INDUSTRIAL GEAR OILS HEAVY DUTY

PETROFLO INDUSTRIAL EP GEAR OILS are a series of **Heavy Duty** lubricants, formulated using high viscosity index base oils to meet the multi-purpose needs of the industrial market. These oils provide protection against rust, corrosion and enhanced oxidation stability, resistant to foaming and contain friction modifiers, help reduce gear tooth and bearing wear on both steel and bronze components. These oils meet the needs of enclosed gear sets working under heavy loads or shock, plain and anti-friction bearings, slide guides, chain drives, mobile equipment, etc... and incorporate a special sulfur-phosphorus additive to provide extreme pressure performance. These oils meet the requirements of **EP** (Extreme Pressure) lubricants of the American Gear Manufacturers' Association (AGMA) Specification 250.04. They also meet Cincinnati Milacron and US Steel Specification 224 requirements. They are available in several ISO viscosity grades ranging from 68 to 3200.

Applications: Steel gear transmissions including spur, helical and bevel gears, industrial gear drives where full extreme pressure performance due to heavy or shock loading is needed, plain and roller contact bearings, circulating and splash lubricated systems, mist systems.

Suitable for use in specifications requires: AGMA 9005 D94EP (150-680 grades), AGMA 9005-02, Bosch Rexroth, Boston Gear, David Brown, Daniell, FAG, Falk, Lenze AG, Minter Machine Company, Morgan Construction, Mueller Weingarten, Rexnord-Stephen, Wartsila, US Steel 224 (150-680 grades), ASTM D-1298, ASTM D-445, ASTM D-92, ASTM D-2783, ISO VG-220, DIN-51517-P.

TYPICAL ANALYSIS FOR PETROFLO INDUSTRIAL GEAR OILS

	Test Method	ISO Viscosity Grade									
AGMA EP Gear Oil Grade		68	100	150	220	320	460	680	1000	1500	3200
Old AGMA Grade		2 EP	3 EP	4 EP	5 EP	6 EP	7 EP	8 EP	8A EP	9 EP	10 EP
Gravity, °API	D 287	29.2	28.6	27.4	26.6	25.8	25.0	23.6	22.8	22.2	19.5
Viscosity:											
@ 40°C, cSt	D445	68	100	150	220	320	460	680	1000	1500	3200
@ 100°C, cSt	D 445	8.8	11.4	14.65	18.6	23.7	30.2	38.4	49.8	61.4	88.8
@100°F, SUS	(caic)	356	521	788	1143	1637	2396	3507	5441	8252	18004
@210°F, SUS	(caic)	56	65	78	95	118	148	194	242	299	433
Viscosity Index	D2270	101	99	96	96	97	96	96	95	97	83
Flash Point, COC, OF	D 92	405	420	445	450	460	470	470	475	505	480
Pour Point, OF	D 97	-15	-10	-10	-10	0	10	10	15	20	40
Copper Corrosion @ 212°F	D 130	1a	1a	1a	1a	1a	1a	1a	1b	1b	1b
Foam, tendency/stability	D 892										
Seq I m1/ml		nil/U	nil/U	nil/0	nil/0	nil/0	nil/0	nil/0	---		
Seq II mi/mi		15/0	nil/0	nil/0	nil/0	nil/0	nil/0	nil/0	---		
Seq III mi/mi		nil/0	nil/0	nil/0	nil/U	nil/0	nil/U	nil/0	---		
FZG, Scuffing Load Capacity, Fail Stage	D 5182	12+	12+	12+	12+	12+	12+	12+	--	--	--
Timken, OK Load, lbs	D2782	60	60	65	70	75	80	80	60	60	60
Four-Ball EP											
Load Wear Index, kgf	D 2783	45	45	45	45	46	47	47	45	45	45
Weld Point, kgf		250	250	250	250	250	250	250	250	250	250
Demulsibility	D 2711										
Free water, ml		87.1	87.2	85	84.8	84.5	82.5	82.5	--	--	--
Emulsion, after cntrfg ml		0.1	0.2	0.2	0.2	0.2	0.1	0.1	--	--	--
Rust Protection	D 665B	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

The above analyses are typical inspections only and the finished product may vary from batch to batch