Synthetic Power Transmission EP Gear Oil (PT)

AMSOIL INDUSTRIAL

Data Sheet

SYNTHETIC EP GEAR OIL

AMSOIL Industrial **Synthetic Power Transmission EP Gear Oil** is engineered to provide maximum resistance to scuffing wear and micropitting fatigue on industrial gears and bearings operating under extreme pressures and shock loads. Its premium synthetic polyalphaolefin (PAO) base oils are fortified with next-generation additive technology to resist shearing under extreme stress, maintain viscosity and meet the long-oil-life requirements of industrial gearbox manufacturers.

Product Benefits

- Excellent EP protection against micropitting and scuffing wear.
- Superior high-temperature viscosity retention.
- Inhibits rust and corrosion to promote long component life.
- Excellent demulsibility for improved filterability and filter life.
- Resists oxidation to fight sludge, carbon and varnish deposits.
- Excellent foam-resistance for reduced gear and bearing wear.

Applications

Use AMSOIL Industrial **Synthetic Power Transmission EP Gear Oil** in heavy-duty industrial gear drives that require EP protection, including steel-on-steel helical, bevel and spur gears with surface-hardened tooth metallurgies, such as those found in the wind turbine, textile, paper, steel, cement, plastic and lumber industries. Supports filtration down to 5 microns using full-flow media and 3 microns using bypass filtration. Consult an AMSOIL Industrial Application Engineer to identify the best solutions for your specific applications.

Specifications & Approvals*

	PTL	PTM	PTN	PTENX	PTO
ISO Viscosity Grade	150	220	320	390	460
Filtered at packaging to 16/14/11 ISO cleanliness	●	●	●	●	●
AGMA 9005-E02	●	–	–	–	–
ANSI/AGMA 9005-F16 (EP)	●	●	●	●	●
AWEA 6006-A03	●	–	–	–	–
DIN 51517 Part 3 CLP	●	●	●	●	●
ISO 12925-1 Type CKD	–	●	●	●	●
SEB 181226	–	●	●	●	●
David Brown S1.53.101 Type E	–	●	●	●	●
Eisenbeiss	–	●	●	–	●
Flender	–	●	●	–	●
General Motors LS-2 (approved)	●	●	–	–	–
U.S. Steel/AIST 224	●	●	●	●	●
Bosch Rexroth, Brevini, Eickhoff, Envision, Gearbox Express Revolution, GE Renewable Energy, GE Transportation (GETS), Hangzhou Advance Gear, Ming Yang, Moventas, NGC Gear, SIEMENS Gamesa Renewable Energy, WIKOV, Winergy, ZF Wind Power	–	–	●	–	–

Typical Technical Properties**

AMSOIL Industrial **Synthetic Power Transmission EP Gear Oil**

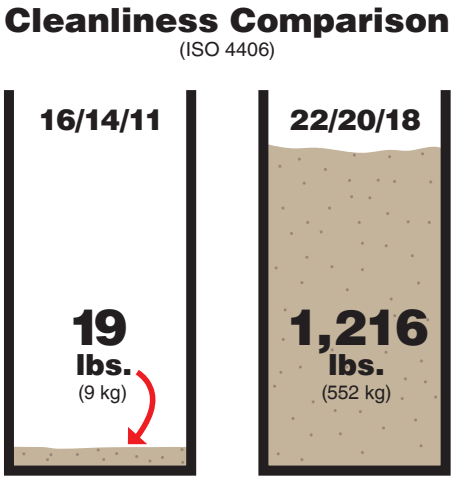
Test		PTL	PTM	PTN	PTENX	PTO
ISO Viscosity Grade	ASTM D2422	150	220	320	390	460
Kinematic Viscosity @ 100°C, cSt	ASTM D445	19.7	26.0	34.8	40.1	47.9
Kinematic Viscosity @ 40°C, cSt	ASTM D445	154.0	223.3	326.7	391.2	473.7
Viscosity Index	ASTM D2270	148	148	151	153	160
Specific Gravity	ASTM D1298	0.8576	0.8607	0.8618	0.8607	0.8649
API Gravity	ASTM D1298	33.5	32.9	32.7	32.9	32.1
Density, lb/gal	ASTM D1298	7.141	7.167	7.176	7.167	7.202
Color	ASTM D1500	L1.5	L1.5	L1.5	L1.5	L1.5
Clarity		Clear	Clear	Clear	Clear	Clear
Four-Ball Wear Test	ASTM D4172					
75°C, 1200 rpm, 40 kg, 1hr		0.40	0.33	0.33	0.33	0.33
150°C, 1800 rpm, 40 kg, 1hr		0.40	0.37	0.37	0.37	0.37
54°C, 1800 rpm, 20 kg, 1hr		0.28	0.24	0.24	0.24	0.24
Moisture, ppm	ASTM D6304C	< 100	< 100	< 100	< 100	< 100
Falex B (Failure), LbF	ASTM D3233	2250	1750	1750	1750	1750
TAN	ASTM D664	0.80	0.80	0.80	0.80	0.80
Foam Characteristics	ASTM D892	0/0/0	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
Copper Corrosion 100°C, 3 hr	ASTM D130	1A	1A	1A	1A	1A
Micropitting	FVA 54	–	10	>10	>10	>10
GFT Class		–	High	High	High	High
FZG Scuffing Load Test, A/8, 3/90	ISO 14635-1	–	>14	>14	>14	>14
FAG FE-8 Bearing Wear Test	DIN 51819-3					
7.5 speed, 80kN load, 80 hr						
Roller Wear (Mw50), mg		–	3	–	–	–
FAG FE-8 High Load Bearing Wear Test	DIN 51819-3					
7.5 speed, 100kN load, 80 hr						
Roller Wear (Mw50), mg		–	–	<1	–	–
Flash Point °C (°F) (COC)	ASTM D92	242 (468)	242 (468)	245 (473)	246 (475)	250 (482)
Fire Point °C (°F) (COC)	ASTM D92	272 (522)	274 (525)	276 (529)	280 (536)	280 (536)
Pour Point °C (°F)	ASTM D97	-42 (-44)	-40 (-40)	-38 (-36)	-36 (-33)	-35 (-31)

Gear Oil Cleanliness

Oil cleanliness helps prolong gear and bearing life and is measured by the ISO 4406 standard, where each number represents particles of a certain size found in an oil sample.

AMSOIL Industrial **Synthetic Power Transmission EP Gear Oil** is filtered at packaging to an ISO 4406 cleanliness code of 16/14/11 as measured by laser particle counter, exceeding the cleanliness requirements of all major gearbox manufacturers.

With an ISO 4406 cleanliness code of 16/14/11, AMSOIL Industrial **Synthetic Power Transmission EP Gear Oil** is 64 times cleaner than oils with a cleanliness code of 22/20/18, which can help extend gearbox life by up to 250%† with proper continued filtration and good maintenance practices.



Contaminants flowing through pump in one year at 32 gpm for 6,500 hours.

Health & Safety Information

For recommendations on safe handling and use, refer to the Safety Data Sheet (SDS) available at AMSOILIndustrial.com or upon request at IndustrialSalesGroup@amsoil.com or (715) 399-6305.

***Technical properties are general characteristics of the product and not manufacturing specifications. Variations that do not affect product performance should be expected. Product formulations are subject to change without notice. Customers are responsible for determining product suitability for use with their equipment.*

†*Based on Noria Corporation's Equipment Life Extension Chart and ISO 4406:17.*

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