

Technical Data Sheet

Texol Gearsyn™ PAO Series

Synthetic gear oils

Product Description

Texol Gearsyn™ PAO synthetic base fluid in these gear oils is a polyalphaolefin which can be used in a temperature range from -55 °C to +120 °C. It is compatible with sealing mineral oils. Blended into this is the latest development in the field of surface improving additive technology designated.

- They are manufactured from high quality polyalphaolefin base oils
- Texol Gearsyn™ PAO synthetic gear oils are available in the viscosity grades 46 to 1000.

Applications and Uses

Texol Gearsyn™ PAO gear oils may be used in a temperature range from -55 °C to +120 °C. They are most valuable during the running-in process as well as in applications where the surfaces have already been damaged in the micro-range.

Typical applications are spur, helical, herringbone, bevel and planetary gears. They are also used in geared couplings, rolling and sliding bearings as well as in gear drive circulating systems.

Advantages

- Considerable decrease in maintenance costs by prolonged service life of lubricant and machine parts
- The excellent friction reducing characteristics are demonstrated through the results of the FZG test (damage load stage > 16)
- Micropitting load capability: high
- Regenerating of damaged friction surfaces on a micro-scale range
- Reduced friction and consequently reduced wear
- Reduced operating temperature
- Lower noise level
- Longer life of gearings and bearings
- Running-in oils or additives may no longer be required
- Preventing and stopping of running-in pittings
- Due to synthetic base fluid excellent oxidation stability ensures the formation of a pressure-stable lube film over a wide temperature range thus providing excellent anti-wear protection

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Typical Properties

Property (Unit)	PAO 46	PAO 68	PAO 100	PAO 150	PAO 220	PAO 320	PAO 460	PAO 680	PAO 1000	Method	
Density at +15 °C	842	846	855	859	860	864	866	869	905	DIN 51757	
Viscosity @40°C, cSt	46	68	100	150	220	320	460	680	1000	DIN 51550	
Viscosity @100°C, cSt	8.1	10.3	14.2	18.9	24.8	33.4	44.7	60	72.8	DIN 51550	
ISO Viscosity Grade	46	68	100	150	220	320	460	680	1000	DIN 51519	
Viscosity Index	136	141	145	146	150	152	158	162	196	DIN ISO 2909	
Flash Point, °C	245	252	257	259	264	265	266	267	285	DIN ISO 2592	
Pour Point, °C	-52	-49	-48	-45	-42	-39	-33	-30	-27	DIN ISO 3016	
Four ball weld load, N	1500	1500	1600	1600	1700	1800	1800	1800	2000	DIN 51350-02	
Four ball wear test, mg										0.28	DIN 51350-03
FZG test (A/8.3/90)										>16	DIN 51354

Notes for Use

- Texol Gearsyn™ PAO synthetic gear oils are compatible with mineral oils and esters. Traces of previous oil in the gear case after draining will not pose any problems. However, the beneficial effects of the additives are reduced, when Texol Gearsyn™ PAO oils are mixed with other gear oils.
- Texol Gearsyn™ PAO oils are not compatible with polyglycols. After draining a polyglycol fill, the gear case must be flushed well with a mineral oil or flushing oil.

Recommendations

Texol Gearsyn™ PAO 220 meets the following recommendations:

- Staubli for textile machines requiring lubricants meeting Gearsyn PAO 220 specifications

Texol Gearsyn™ PAO lubricants meet the following performance requirements:

- U.S. Steel Specification No.224
- AGMA Specifications 250.04 and 251.02 for industrial enclosed and open gearing respectively
- David Brown scheme (type H) with no restrictions
- DIN 51517/3