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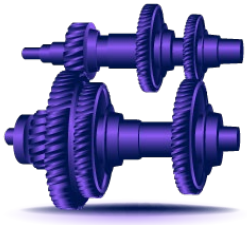
TECHNICAL PRODUCT SHEET

TITANUS EP SYNPAO

ISO 150, 220, 320, 460, 680



DESCRIPTION

TITANUS EP SYNPAO series consists of premium-tier industrial gear oils engineered to deliver exceptional microscopic wear resistance, superior bearing protection, and excellent compatibility with the elastomers, liquid sealants, and paints used in modern gearbox designs. Formulated with specially selected PAO base stocks and a top-of-the-class additive system free of lead compounds, these lubricants provide outstanding protection under severe operating conditions. They offer excellent demulsifying and air-release properties, outstanding thermal and oxidation stability, and very high load-carrying capacity, contributing to extended oil drain intervals, reduced maintenance, and reliable long-term gearbox performance.

APPLICATIONS

TITANUS EP SYNPAO series exceeds the performance requirements of the Flender Specification Rev. 16 for helical, bevel, and planetary gears operating under highly stressed conditions. The oils demonstrate a boosted load-carrying capacity compared with conventional mineral-based gear oils, providing reliable protection against scuffing, wear, and surface fatigue in heavily loaded gear drives. In addition to gear lubrication, these lubricants are suitable for selected non-gear applications, including highly loaded, low-speed plain and rolling contact bearings, where excellent film strength, wear protection, and long service life are required.

SPECIFICATIONS

DIN	51517 Part 3 CLP (2008/11)	Flender	Revision 16 (*Approved*)
DIN	51502	U.S. Steel	224 (updated)
ISO	6743-6 (ISO-L-CKC, ISO-L-CKD)	David Brown	S1.53.101
ISO	12925-1 CKC, CKD (2002)	AGMA	9005-E02 (2002)

PROPERTIES

TITANUS EP SYNPAO series provide high film strength and excellent load-carrying capacity, delivering reliable protection under severe operating conditions. They offer effective extreme-pressure (EP) and anti-wear (AW) properties, along with improved thermal and oxidation stability to ensure extended service life. The formulation exceeds strict Flender requirements, is fully compatible with common seal materials, and is suitable for a wide range of industrial applications.

BENEFITS

TITANUS EP SYNPAO series provide effective protection of gear teeth against wear, surface distress, and premature failure, while helping to protect against wear and scuffing under demanding operating conditions. They enable extended oil drain intervals that help minimize downtime and maintenance costs and offer an expanded operating temperature range with excellent low-temperature performance. Superior foam control ensures reliable lubrication and smooth operation, while reduced lubricant consumption and extended service life contribute to lower storage requirements and overall operating costs.

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v1.JAN26

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PHYSICAL-CHEMICAL CHARACTERISTICS

TITANUS EP SYNPAO	METHOD	ISO 150	ISO 220	ISO 320	ISO 460	ISO 460
Density at 15°C, g/cm^3	ASTM D4052	0.856	0.856	0.861	0.862	0.864
Viscosity, Kinematic (cSt) 40°C	ASTM D445	152	225	324	474	695
Viscosity, Kinematic (cSt) 100°C	ASTM D445	22.6	31.3	42.2	57.6	79.0
Viscosity index	ASTM D2270	177	182	186	191	197
Flash point, COC, °C	ASTM D92	245	257	251	245	261
Pour point, °C	ASTM D97	-48	-48	-45	-45	-36
Copper corrosion	ASTM D 130	1b	1b	1b	1b	1b
Foam Tendency / Stability, ml Sequence I Sequence II Sequence III	ASTM D892	 0/0 0/0 0/0	 0/0 0/0 0/0	 0/0 0/0 0/0	 0/0 0/0 0/0	 0/0 0/0 0/0
Air release, min	ASTM D3427	<0.5	1.4	<0.5	3.2	3.2
Demulsibility, min.	ASTM D1401	15	20	25	40	60
FZG gear scuffing test, A/8.3/90	DIN 51354	14+	14+	14+	14+	14+
FZG micropitting test @90°C	FVA 54-7	10+	10+	10+	10+	10+
Rust Test – Procedure A	ASTM D665	Pass	Pass	Pass	Pass	Pass
Rust Test – Procedure B	ASTM D665	Pass	Pass	Pass	Pass	Pass

The above mentioned characteristics represent mean values.

STORAGE

All packages must be stored in covered, well-ventilated areas. If outdoor storage cannot be avoided, barrels must be placed horizontally to prevent water ingress and to protect labels and markings from damage. Products must not be stored at temperatures above 60 °C and must not be exposed to direct sunlight, freezing conditions, or extreme temperature fluctuations.

HEALTH & SAFETY

This product is not considered to pose significant risks to health or safety when used as intended and in accordance with recommended personal hygiene practices. It must not be applied for purposes other than those for which it has been formulated. For detailed guidance on safe handling and use, refer to the Safety Data Sheet (SDS).

USED OILS

Used lubricants must be collected at designated collection points to prevent environmental contamination. They must not be mixed with solvents, brake fluids, or antifreeze.