



Perfecto X

Premium Turbine Lubricant

Description

Perfecto X are turbine oils of highest quality with extremely hydrogen-treated base oils. They contain additives which increase the resistance to aging, improve the corrosion protection properties as well as suppress the foaming tendencies. The additives in the Perfecto X oils contain no metal-organic compounds like organic zinc compounds.

Application

The turbine oils Perfecto X are preferred for the lubrication of steam and gas turbines and their control systems. The oil supply mostly take place on a common circuit. The oils meet the requirements "Schmier- und Regleröle L-TG" according to DIN 51 515 part 2, BS 489 and ISO 8068 "Lubricating Oils for Turbines, categories L-TSA and L-TGA" and the specifications and requirements of the turbine manufacturers:

- Siemens AG-Power Generation TLV 9013 04 (gas & steam turbines)
- Alstom HTGD 90 117 D
- Alstom Energie (NBA p50001a)
- General Electric GEK 107395
- General Electric GEK 32568F
- Hitachi (steam turbines)

Features / Benefits

- High chemical and thermal stability means low aging even at longer operating life
- Good viscosity temperature behavior enables to start cold machines without problems and ensures reliable lubrication even at high operating temperatures
- Excellent foaming characteristic
- Good corrosion protection, even with condensation and possible water contamination
- Good water demulsification ensures rapid separation of water and oil at water contamination without emulsification
- Neutral behavior against sealing materials and non-ferrous metals

Typical Physical Characteristics

Test	Method	Unit	Perfecto X 32	Perfecto X 46	Perfecto X 68
Viscosity Grade	ISO 3448	-	ISO VG 32	ISO VG 46	ISO VG 68
Colour	DIN ISO 2049	-	L1,0	L1,0	L1,5
Density (15°C)	DIN 51757	kg/m ³	866	867	868
Viscosity (0°C)	DIN 51562	mm ² /s	325	560	1050
Viscosity (40°C)	DIN 51562	mm ² /s	32	46	68
Viscosity (100°C)	DIN 51562	mm ² /s	5,7	7,1	9,5
Viscosity Index	DIN ISO 2909	-	112	112	112
Pour Point	DIN ISO 3016	°C	-15	-15	-12
Neutralisation Number	DIN 51558	mg KOH/g	0,05	0,05	0,05
Flashpoint COC	DIN EN ISO 2592	°C	222	234	234
Ash	DIN EN ISO 6245	%	<0,01	<0,01	<0,01
Foam - Sequence 1 (25°C) Tendency / Stability after 10 minutes	ISO 6247	ml	<100 / 0	<100 / 0	<100 / 0
Foam - Sequence 2 (95°C) Tendency / Stability after 10 minutes	ISO 6247	ml	<100 / 0	<100 / 0	<100 / 0
Foam - Sequence 3 (25°C after 95°C) Tendency / Stability after 10 minutes	ISO 6247	ml	<100 / 0	<100 / 0	<100 / 0
Air Release (50°C)	DIN ISO 9120	min.	3	4	5
Water Seperability	DIN 51589	s	<100	<100	<100
Copper Corrosion (3h at 100°C)	DIN EN ISO 2160	degree of corrosion	1a	1a	1a
Rust Test - steel Procedure A (deionized water)	DIN ISO 7120	degree of corrosion	0	0	0
Rust Test - steel Procedure B (seawater)	DIN ISO 7120	degree of corrosion	0	0	0
FZG Gear Failure Load Stage (A/8,3/90)	DIN ISO 14635-1	-	6	7	7
Aging TOST Test: Time to increase 2,0 mg KOH/g	ASTM D 943	hours	>10000	>10000	>10000

Packaging and Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

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