PRODUCT DATA SHEET

Q8 van Gogh EP 46

High performance turbine oil

Description

Q8 van Gogh EP 46 is a high performance turbine oil based on selected premium base fluids. This product is developed for use in steam and gas turbines as well as combined cycle applications, including geared turbines. Q8 van Gogh EP 46 meet the challenges of the latest generation turbines making it suitable to operate under mild to severe conditions. Designed as part of the Q8Oils clean technology program to ensure superior varnish/deposit control and good load carrying capabilities in combination with long oil life.

Applications

Industrial steam- and gas turbines, including geared turbines and combined cycle operations Hydroelectric turbines Circulation systems where turbine oil quality is required Centrifugal- and axial pumps, turbo-compressors, gas booster compressors (GBC) where turbine oil quality is recommended

Features	Benefits
Turbine performance	*Long trouble free service life, excellent turbine protection and outstanding resistance against ageing*
Enhanced technology	*Developed with outstanding anti-wear/extreme pressure protection to meet the load carrying requirements of geared turbines*
Lower operational costs	*Specifically developed with excellent protection against the formation of varnish*

Specifications & Approvals

ASTM	D 4304, Type II (EP)	**ISO**	8068
British Standard	489	**Indian Standard**	IS 1012:2002
Chinese Standard	GB 11120-2011	**JIS**	K 2213 Type 2
DIN	51515-1 L-TDP	**Siemens**	MAT812109
DIN	51515-2 L-TGP	**Siemens**	TLV 9013 04
GE Thermodyn	ISPSH901SDI	**Siemens**	TLV 9013 05
ISO	6743-5 L-TGE	**Solar Turbines**	ES 9-224 (Class I)
ISO	6743-5 L-TSE	**Turbomach**	ES 9-224 (Class I)

Properties

	Method	Unit	Typical
Density, 15 ˚C	D 4052	g/ml	0,875
Kinematic Viscosity, 40 ˚C	D 445	mm²/s	46.0
Kinematic Viscosity, 100 ˚C	D 445	mm²/s	7
Viscosity Index	D 2270	-	109
Total Acid Number	D 974	mg KOH/g	0.13
Oxidation Characteristics (TOST)	D 943	hrs	> 10.000
Modified Oxidation Stability (RPVOT)	D 2272	%	95
Oxidation Stability (RPVOT)	D 2272	min	> 1.000
Foam, 5 min blowing, seq. 1-2-3	D 892	ml	10/10/10
Foam, 10 min settling, seq. 1-2-3	D 892	ml	0/0/0
Oxide Ash	D 482	% mass	< 0.001
Zinc content	D 4951	mg-kg	< 5
Pour Point	D 97	˚C	-12
Flash Point, COC	D 92	˚C	222
Colour	D 1500	-	L 1.0
Air Release, 50 ˚C	D 3427	min	4
Emulsion, Distilled Water, 54.4 ˚C	D 1401	-	40/40/0 (10)
Rust Test, Proc. A and B, 24 h	D 665	-	pass
Copper Strip, 3 h, 100 ˚C	D 130	-	1
FZG Test, A/8.3/90	DIN 51354	load stage	10
Four Ball Wear, 392 N, 75 ˚C, 1200 rpm	D 4172	mm	0.35 - 0.5

The figures above are not a specification. They are typical figures obtained within production tolerances.