Product Data Sheet

TYPICAL PHYSICAL CHARACTERISTICS

Property	Anvol PE 46 XC	Test Method
Kinematic Viscosity, cSt @ 100ºC	5	ASTM D445
@ 40ºC	43.4	
@ 20ºC	175	
@ 0ºC	1700	
Specific Gravity @ 20ºC	1.13	IP190
Pour Point, ºC	-20	ASTM D97
Neutralisation Nº, mg KOH/g	0.06	ASTM D664
Chlorine Content, ppm	25	Microcoulometric
Water Content, %	0.06	ASTM D1744
Particulate Contamination, (*SAE ARP 749D)	Class 3	Automatic Particle Counter
Boiling Point@13.3x10-bar(10mm Hg), ºC	262	ASTM D892
Foaming @ 24ºC, ml Tendency	30	-
Stability	0	
Air Release @ 50ºC, min	1	IP313
Emulsion Characteristics, min	1	ASTM D1401
Demulsification Nº, sec	165	IP19

NOTE: ***SAE ARP 749D is also known as SAE A6D

Product Data Sheet

FIRE RESISTANT

Property	Anvol PE 46 XC	Test Method
Flash Point (Open Cup), ºC	246	ASTM D92
Fire Point, ºC	368	ASTM D92
Auto-ignition Temperature, ºC	575	ASTM D2155
Wick Ignition, max persistence of burning, secs	5	NCB 570/1981 (Appendix B) or Section 3.3.2 **
Spray Ignition, max persistence of burning	3	Factory Manual Standard 6930
Hot Channel Test	No ignition	
Hot Manifold Ignition, ºC	No flashing or burning on tube at 704ºC	Factory Manual Standard 6930

NOTE: ** 7th Luxembourg Report on specifications and testing conditions relating to fire resistance fluids used for power transmission in mines, issued by the European Communities Safety and Health Commission for the Mining and Extractive Industries.

LUBRICATION PROPERTIES

Property	Anvol PE 46 XC		Test Method
Vickers Vane Pump Test, hrs	250	1000	IP281
Ring Weight Loss, mg	5.9	7.1	
Vane Weight Loss, mg	3.3	3.7	
Total Weight Loss, mg	9.2	10.8	
4 Ball Wear Test (40kg load for 1hr)	0.6		IP239
Scar Diameter (70kg load for 1hr), mm	2.18		-
FZG Gear Test Failure Load Stage	7		DIN 51354 Part 2 (A/8.3/90)
Specific Weight Loss, mg/kWh	0.45		

COMPATIBILITY

Anvol PE 46 XC is compatible with all metals commonly found in electro-hydraulic control systems. Aluminium should be hard anodised and the use of copper and copper alloys kept to a minimum. In common with all phosphate ester fluids, special seals are required and the following materials are suitable: Viton, Butyl Rubber, PTFE and under certain conditions Ethylene Propylene Rubber. Where painting is necessary, epoxy resin based paints should be used with Anvol PE 46 XC since other paints may be softened and lifted.

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STABILITY

Property	Anvol PE 46 XC	Test Method
Method A W-L-79lb	-	FTMS
Viscosity Change @ 40ºC,	+1.8	5308.6 modified 168hrs @ 150ºC
Acid Value Change (air/hour) mgKOH/g	+0.09	5 litres
Metal Weight Changes, mg/cm^2		
Magnesium Alloy	-0.01	
Aluminium Alloy	-0.01	
Copper	0	
Cadmium Plated Steel	-0.02	
Mild Steel	-0.01	
Method B	-	DIN 51373
Fluid Neutralisation Nº Increase, mgKOH/g	0.04	-
Absorption Fluid, mgKOH/g Neutralisation Nº	0.01	-
Total Acidity Increase	0.05	
Metal Weight Changes, mg Copper	+0.3	-
Iron	+0.2	
Hydrolytic Stability	ASTM D2619	(modified)
Fluid Layer, mgKOH/g Acid Nº Change	+0.2	-
Acidity of Aqueous Layer	0.05	
Weight Change of Copper	-0.008	

Health and Safety information sheets are available for all Castrol products from the address below:
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