HFDU Ester-type Flame-Retardant Hydraulic Oil

Performance Overview

Maxtop HFDU ester-type fire-retardant hydraulic oil is a fatty acid ester fire-retardant hydraulic oil formulated with base oil obtained by esterification of trimethylolpropane and saturated mixed fatty acids, and with the addition of antioxidants, anti-wear agents, oiliness agents, rust inhibitors, defoamers, and other functional agents. It has a high flash point and auto-ignition point: it will not burn when exposed to fire, providing a high level of fire protection.

Features

01

Excellent flame resistance: Due to its synthetic ester base, HFDU will not burn when exposed to fire, providing a high level of fire protection.

02

High thermal stability: Able to maintain performance at high temperatures, suitable for high temperature working environments.

03

Good lubricity: Contains anti-wear agents, provides good lubrication effect and reduces equipment wear.

04

High viscosity index: Maintains stable viscosity under temperature changes, suitable for use in a wide temperature range.

05

Good compatibility: Compatible with most hydraulic system materials and seals, including hoses and sealing materials.

06

Long service life: good anti-oxidation and chemical stability, long service life, and reduced oil change frequency.

Application Scenario

It is widely applied in hydraulic systems with high requirements for fire prevention and environmental friendliness in industries such as steel, coal mines, ships, aviation, nuclear power and environmental protection projects, especially suitable for working environments with high temperatures, high pressures or flammable and explosive properties.

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HFDU Ester-type Flame-Retardant Hydraulic Oil Performance Indicators

Project	Quality indicators	
Viscosity grade (GB/T 3141)	46	68
Kinematic viscosity (40℃)/(mm2/s)	41.4~50.6	61.2~74.8
Appearance	"Transparent"	
Moisture (mass fraction) /% shall not be greater than	0.1	
Pour point /℃ is less than or equal to	- 30	
Mechanical impurities	no	
Density (at 20℃)/(kg/m ^{3}) is less than	950	
The acid value (calculated as KOH)/(mg/g) is less than or equal to	0.5	
Air release value (50℃), min shall not be greater than	8	10
The flash point /℃ shall not be lower than	330	
Foam characteristics (foam tendency/foam stability)/(mL/mL) 25℃ shall not exceed 50℃ shall not exceed 25℃ shall not exceed	 150/10 75/10 150/10	
Liquid phase corrosion (24h)	Rust-free	
Copper sheet corrosion (100℃, 3h)/grade shall not be greater than	1b	
The rotating oxygen bomb (150℃) min shall not be less than	100	
Rubber compatibility (60℃/168h) Nitrile rubber (NBR 1) The rate of volume change /% is not greater than The hardness variation is not less than/not greater than Rate of change of tensile strength /% Rate of change in elongation at break /%	 7 7 / + 2 Report Report	
Flash point (open) /℃	300	
FZG gear test (A/8.3/90)/Failure stage is not less than	11	
The impeller pump test (100h, total weight loss) /mg shall not be greater than	50	
Viscosity index greater than or equal to	180	
The hydroxyl value mgKOH/g is less than or equal to	15	
Iodine value: g/100g	75~95	

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