

# Fatty acid ester fire resistant hydraulic oil (MTFAE)

## ● Performance Overview

Maxtop MTFAE fatty acid ester fire-resistant hydraulic oil is a fatty acid ester fire-resistant hydraulic oil formulated by esterifying trihydroxymethylpropane with saturated mixed fatty acids as the base oil, and adding various functional agents such as antioxidants, anti-wear agents, oiliness agents, rust inhibitors, and defoamers. It has a high flash point and autoignition point: It will not burn when exposed to fire, providing a high level of fire protection. Anti-foam reduces foam formation: improves lubrication effect and prevents foam from affecting equipment operation. Maintain stable performance: Ensure optimal performance of hydraulic oil under various working conditions.

## ● 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.



# Fatty acid ester fire resistance hydraulic oil performance index

Project	Quality indicators	
Viscosity grade (GB/T 3141)	46	68
Kinematic viscosity (40°C)/(mm <sup>2</sup> /s)	41.4~50.6	61.2~74.8
Appearance	"Transparent"	
Moisture (mass fraction) /% shall not be greater than	0.1	
Pour point /°C is less than or equal to	- 30	
Mechanical impurities	no	
Density (at 20°C)/(kg/m <sup>3</sup> ) is less than	950	
The acid value (calculated as KOH)/(mg/g) is less than or equal to	0.5	
Air release value (50°C), min shall not be greater than	8	10
The flash point /°C shall not be lower than	330	
Foam characteristics (foam tendency/foam stability)/(mL/mL)		
25°C shall not exceed	150/10	
50°C shall not exceed	75/10	
25°C shall not exceed	150/10	
Liquid phase corrosion (24h)	Rust-free	
Copper sheet corrosion (100°C, 3h)/grade shall not be greater than	1b	
The rotating oxygen bomb (150°C) min shall not be less than	100	
Rubber compatibility (60°C/168h)		
Nitrile rubber (NBR 1)		
The rate of volume change /% is not greater than	7	
The hardness variation is not less than/not greater than	7 / + 2	
Rate of change of tensile strength /%	Report	
Rate of change in elongation at break /%	Report	
Flash point (open) /°C	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	