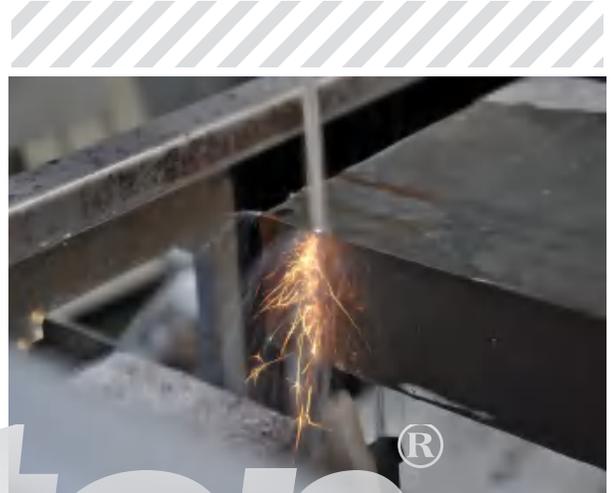


## Synthetic wire cutting fluid

### ● Performance Overview

Maxtop Synthetic wire cutting fluid is a high-performance and environmentally friendly dedicated cutting fluid developed by Maxtop for the wire cutting processing industry. This product adopts an advanced fully synthetic formula system, free of mineral oil, and features outstanding cooling, lubrication, rust prevention and cleaning performance. It can effectively enhance the efficiency of wire cutting processing, reduce production costs, and at the same time meet environmental protection requirements. It is an ideal choice for modern wire cutting processing.



### ● Features

01

**Precise control of electrical conductivity:** According to the different products processed by users and their different requirements for electrical conductivity, differentiated products with different electrical conductivities can be provided.

02

**High-efficiency cooling:** Unique cooling performance effectively reduces heat during the cutting process, prevents workpiece deformation, and improves cutting accuracy.

03

**Excellent lubrication:** The highly efficient lubrication formula reduces the friction between the tool and the workpiece, extends the tool's service life, and lowers tool wear.

04

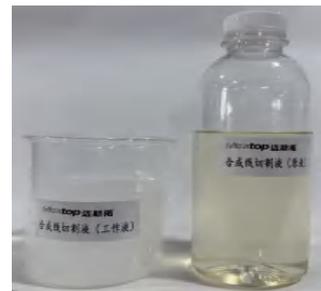
**Anti-rust performance:** Special additives are used to effectively prevent workpieces and tools from rusting, thereby extending the service life of the products.

### ● Application Scenario

Synthetic wire cutting fluid is suitable for wire cutting processing of various metal materials, such as stainless steel, carbon steel, aluminum alloy, copper alloy, etc., and is widely used in aviation, aerospace, automotive, electronics, machinery and other industries.

### ● Usage method

Add the cutting fluid to the liquid storage tank of the wire-cutting machine tool and ensure that the liquid level height is appropriate. During the cutting process, adjust the flow rate of the cutting fluid according to the type and thickness of the processed material. Replace the cutting fluid regularly to keep it clean and stable in performance.



# Performance indicators of synthetic wire cutting fluid

Project	Quality indicators
Appearance	Uniform and transparent liquid, without suspended matter, sediment or stratification
Smell	Mild and odorless
Density (g/cm <sup>3</sup> )	1.01-1.08 (20°C)
pH value	8.5-10.5
Surface tension (mN/m)	≤ 35
Defoaming property	fast
Anti-rust property	Cast iron single sheet: Grade A (72 hours)   Cast iron laminated sheet: Grade A (24 hours)
Corrosiveness	It has no corrosive effect on metals such as steel, copper and aluminum (55°C, 24 hours).
Electrical conductivity (μS/cm)	1000-4000
Antibacterial property	Low growth rate of bacteria and mold (regular testing)
Dilution ratio	1:15/30

# Comparison of microemulsion type vs. synthetic wire cutting fluid

Characteristics	Microemulsion wire cutting fluid	Synthetic wire cutting fluid
Lubricity	High (oil film lubrication)	Medium (dependent on additives)
Extreme pressure property	High (partially dependent on additives)	Medium (dependent on additives)
Cooling property	high	Extremely high
Environmental friendliness	High (degradable)	Extremely high (oil-free)
Cost	Medium to high	High (complex additive system)
Maintenance difficulty	low	Extremely low
Applicable load	High load	Medium and high load

