

Guide rail oil

● Performance Overview

Maxtop Guide rail oil is a special type of lubricating oil specially designed for sliding guide rails and precision transmission components of mechanical equipment. Its core performance includes □ high friction reduction, wear resistance, anti-crawling, excellent adhesion, oxidation resistance and environmental adaptability, which can significantly reduce operating resistance, extend service life, and ensure stability and accuracy in precision machining. It adopts a high-quality base oil and extreme pressure additive formula to form a high-strength lubricating film on the metal contact surface. It can effectively prevent wear phenomena such as micro-pitting and scratches on the surface of the guide rail.

● Features

01

High-strength oil film: Special additives form a long-lasting lubricating film, reducing the direct metal contact between the guide rail and the slider and lowering wear.

02

Low coefficient of friction: Suitable for high-speed and heavy-load working conditions, it enhances the operational efficiency of equipment and reduces energy consumption.

03

By optimizing the viscosity-temperature characteristics of the oil product, the "jerking" phenomenon during low-speed movement is eliminated to ensure the stability and positioning accuracy of processing equipment (such as CNC machine tools).

04

Water and dirt resistant: Resists the invasion of water vapor and dust, extends the lubrication cycle, and is suitable for humid or dusty environments.



● Application Scenario

1. Precision machine tools and processing equipment

Guide rails for CNC machine tools: Lubrication of guide rail systems for lathes, milling machines, grinders, etc.

High-precision measuring equipment: three-coordinate measuring machine, sliding parts of laser cutting machine.

2. Automation and Industrial Robots
Mechanical arm guide rails, linear modules, ball screw drive systems.

Sliding platforms and transmission mechanisms of packaging machinery and printing equipment.

3. Heavy Machinery and special working conditions

Heavy-duty guide rail lubrication for large gantry milling machines and boring machines.

Equipment protection in high-temperature workshops, coastal high-humidity environments or mine dust conditions.

4. Other fields

Maintenance of precision slide rails for medical equipment and components for rail transit, etc.

Performance indicators of guide rail oil

Project	Quality indicators						
Viscosity grade	32	46	68	100	150	220	320
Kinematic viscosity (40℃)/(mm2/s)	28.8~ 35.2	41.4~ 50.6	61.2~ 74.8	90 - 110	135~ 165	198~ 242	288~ 352
Viscosity index	Report						
Density (at 20℃), kg/m ³	Report						
Neutralization value, mgKOH/g	Report						
Appearance (Transparency)	Clear and transparent				Transparent		
Flash point (open), °C not lower than	150	160	180				
Corrosion test (copper sheet, 60℃, 3 hours), grade shall not be greater than	2						
Liquid phase corrosion test (distilled water method)	Rust-free						
Pour point, °C not higher than	-9					-3	
Wear resistance: Grinding spot diameter (200N,60min, 1500r/min) mm is not greater than	0.5						
Mechanical impurities, % (m/m) not greater than	no					0.01	
The moisture content, % (m/m), is not significant	Trace						