

RLT-F50 Water-Based Micro-Emulsion EP Cutting Fluid

Description

RLT-F50 is a high-performance water-based micro-emulsion extreme pressure cutting fluid. Formulated with premium extreme pressure lubricating additives, rust inhibitors, non-ferrous metal passivators and foam suppressants, this product contains no hazardous substances such as heavy metals, sodium nitrite or phenols, complying with global environmental and workplace safety requirements.

It delivers balanced extreme pressure lubrication, rapid cooling and long-lasting anti-rust performance, suitable for conventional machine tools and automated flexible machining systems. Widely applicable to turning, milling, drilling and grinding of aluminum alloy, cast iron, alloy steel, carbon steel and die steel.

Features and benefits

1. Combined physical and extreme pressure (EP) chemical lubrication provides excellent load-bearing lubrication and cooling effect, covering light finishing and heavy-duty rough machining.
2. Powerful anti-rust capacity and excellent biological stability to restrain bacteria and mold reproduction, extending service life of working fluid.
3. Effectively reduces tool wear, prolongs cutter service life and improves surface finish of machined workpieces.

Typical physical and chemical properties

Test Item	Test Method	Technical Index
Appearance	Visual Inspection	Transparent liquid
pH Value (5%wt)	pH Meter	8.8 ~ 9.2
Cast Iron Rust Resistance Test condition: 35°C±2°C, RH>95%, single piece for 24h, laminated piece for 8h	GB/T 6144	Grade A
Corrosivity Test (55°C±2°C,h)	GB/T 6144	Steel disc 24h, Passed
		Red copper 8h, Passed
		LY12 Aluminum 8h, Passed

Test Item	Test Method	Technical Index
Defoaming Performance (Tested with distilled water)	GB/T 6144	Foam height ≤ 2mL after standing for 10 min
Nitrite Content, mg/L	Precision nitrite test paper	Not detected

Application Instructions

1. Fully clean the liquid tank and all pipelines to remove residual old fluid, sludge and microbial contaminants before use.
2. At ambient temperature, slowly add micro-emulsion cutting fluid concentrate into clean water under continuous stirring, keep stirring until a stable homogeneous working solution is formed. Tap water or deionized water are both acceptable for dilution.

Packaging Specifications

- 200L/drum (or customized according to customer requirements).

Storage & Handling

- Store in a dry, well-ventilated area.
- Keep container tightly sealed when not in use.
- Avoid contamination with water or other substances.

Shelf life: 12 months under recommended storage conditions.