

# Technical Data Sheet



## RLT-SO101P

Paraffin-Based Soluble Oil Package

### Description

RLT-SO101P is a fully-formulated additive system engineered exclusively for metalworking soluble oil production. The blending workflow is highly user-friendly: simply incorporate this additive package into paraffin-type base oil to manufacture high-cost-performance soluble cutting oils.

Soluble oils compounded with this product deliver exceptional long-term stability, effectively resist rancidity and microbial deterioration, and extend service cycle significantly. This formulation contains zero nitrites, and excludes phenols, aldehydes, phosphorus, sulfur and chlorine-containing hazardous components.

### Typical physical and chemical properties

| Test Parameter                                  | Test Standard      | Technical Requirement                           |
|-------------------------------------------------|--------------------|-------------------------------------------------|
| Neat Package Appearance                         | Visual Inspection  | Reddish-brown translucent liquid                |
| Finished soluble oil appearance                 | Visual Inspection  | Reddish-brown transparent or translucent liquid |
| 5% Dilution Appearance                          | Visual Inspection  | Milky emulsion                                  |
| pH (5% Dilution)                                | pH Meter           | 9.0–9.8                                         |
| Rust Resistance (Cast Iron, 5% Dilution, 2h)    | JB/T9189-2010      | Grade 0, no rust                                |
| Al Corrosion Resistance (LY12, 5% Dilution, 8h) | GB/T6144           | Grade A                                         |
| Nitrite Content                                 | Nitrite Test Strip | Not Detected                                    |

### Core Product Advantages

- 1.The final soluble oil offers premium boundary lubrication, which reduces tool wear to extend service life and upgrade surface finishing quality of machined parts.
- 2.Powerful anti-rust performance delivers reliable inter-process corrosion protection for workpieces during intermediate storage.
- 3.Diluted working solution maintains outstanding colloidal stability, free of oil separation and soap precipitation throughout service.
- 4.Custom-designed emulsifier system tailored for paraffin base stock compatibility.

### Blending & Operation Instructions

#### Formulation Procedure

At ambient temperature, add paraffin base oil into this additive package and agitate continuously until the mixture becomes fully clear, yielding concentrated soluble oil.

#### Recommended loading ratio

20–25 wt% in finished concentrate.

#### Note

Emulsification compatibility differs across various base oil grades. A bench compatibility trial is strongly advised prior to formal mass blending to verify complete emulsification.

**Application**

RLT-SO101P It is applicable to machining operations on cast iron, carbon steel, alloy steel, aluminum and various aluminum alloy substrates.

**Packaging Specification**

- Standard packaging: 200L metal drums / 1000L IBC tote tanks
- Net weight per drum: 180 kg; Net weight per IBC: 1000 kg
- Customized packaging specifications are available upon customer request

**Storage**

- Store inside warehouse
- Store out of direct sunlight
- Avoid water collecting on barrel top

**Disclaimer**

- All data contained in this TDS is obtained from standard laboratory tests for reference only and shall not be regarded as binding specifications.
- Product performance varies with base oil, mixing formula, water quality and working conditions.
- Customers must complete pre-production trials before mass use. For additional technical documents and support, please visit our official website: [www.rolitom.com](http://www.rolitom.com).