

Technical Data Sheet

RLT-AW2000 Aluminum Wheel Cutting Fluid

Product Overview

RLT-AW2000 is a high-performance semi-synthetic microemulsion cutting fluid custom-developed for automotive aluminum wheel roughing and finishing operations. It is compounded with premium lubricating additives, ferrous rust inhibitors, non-ferrous anti-tarnish agents and low-foam suppressors.

This formulation is free of heavy metals, sodium nitrite, phenols and other hazardous raw materials. The concentrate is fully water-miscible at all mixing ratios and delivers outstanding heat dissipation during high-speed cutting, effectively lowering cutting zone temperature and greatly improving workpiece dimensional accuracy and surface quality.

Typical Physical & Chemical Properties

All test results are obtained from standard laboratory tests with 5 wt% working dilution.

Test items		Test Methods	Technical Indicators
Appearance (Neat)		Visual inspection	Transparent liquid
pH, 5%wt.		pH meter	8.7-9.1
Rust protection, 5%wt (18-28℃, 2h, Iron Chips)		JB/T9189-2016	Class 0, corrosion free
Corrosive (chemistry) (55℃±2℃), h	Steel	GB/T6144	24h, Pass
	Copper		8h, Pass
	LY12 Aluminium		8h, Pass
Antifoaming, Distilled water		GB/T 6144	No more than 2ml of foam after 10min

Performance Advantages

- Integrates physical and chemical lubrication systems to balance superior lubricity and rapid cooling, stabilizing machining precision and optimizing workpiece surface finish.
- Excellent multi-metal anti-corrosion & anti-tarnish performance; effectively avoids surface staining, white streaks and haze on aluminum wheel parts after machining.

Mixing & Operating Guidelines

- Thoroughly clean the machine sump, pipelines and filter system before initial filling. At ambient temperature, slowly add neat concentrate into pre-filled clean circulating water to form stable working fluid.
- Adjust working concentration according to machining load: recommended application concentration ranges from 3 wt% to 8 wt%.

Packaging, Storage & Shelf Life

- Standard Packaging: 20L plastic drum, 200L steel drum; 1000L IBC tote tanks available upon customer request
- Storage Specifications: Store sealed drums indoors in dry, ventilated warehouses; avoid direct sunlight and high-temperature heat sources. Fully re-seal lids after partial use to prevent water ingress and contamination.
- Shelf Life: 12 months shelf life for unopened original drums stored under recommended conditions.

Safety Handling Precautions

- Avoid prolonged direct skin contact with the concentrate; wear chemical-resistant gloves during operation. Rinse skin thoroughly with clean water if contact occurs.
- In case of eye splashing, flush eyes continuously with running water for at least 15 minutes and seek medical treatment if irritation persists.
- Do not mix this product with other brands or types of metalworking fluids, which may cause emulsion breakdown and performance degradation.

Disclaimer

All technical data, performance descriptions and application guidance contained in this TDS are derived from ROLITOM's internal laboratory tests and verified field practice, deemed accurate and reliable at the time of release.

ROLITOM and its authorized partners offer no express or implied warranty of product performance, as final machining results are subject to local water quality, processing load, equipment status and workpiece materials beyond our control. End users shall conduct pre-production compatibility trials on actual aluminum wheel materials before mass production. All losses arising from direct use without prior testing shall be borne solely by the customer.