TRIM™ MicroSol™ 590XT

Advanced Technology Aerospace Semisynthetic

TRIM MicroSol 590XT is an environmentally-friendly semisynthetic, microemulsion coolant formulated to pass aerospace approval test requirements. It utilises the newest technology to provide long life and excellent protection of sensitive alloys. MicroSol 590XT improves on the proven performance of previous generations with a robust stability package using the most environmentally-safe ingredients. The formula is a favourite of environmental advocates, safety professionals and demanding production managers.

Aerospace Components Manufacturer Reduces Consumption with Master Fluid Solutions™



Even a company with decades in the industry will occasionally struggle with its cutting fluid consumption. A large UK-based aerospace components manufacturer that performs milling, turning and grinding operations experienced this firsthand. Their location houses over 100 machines that work with a range of materials, including aluminium, steel, titanium and Inconel. Along with achieving performance objectives, they also needed to meet local and internal health, safety and environmental standards.

Aerospace Approvals

Company	Specification
Airbus	A2MS 569-001
Airbus	AIPS00-00-010
Boeing	BAC5008
Bombardier Aerospace	BAMS 569-001
Dassault	DQGT0.4.2.0065 Appendix D
Lufthansa Technik	No specification available
Raytheon Technologies/Collins Aerospace/Pratt & Whitney	PMC 9297
Safran Group	PCS-4001/4002, PR6300

Choose MicroSol 590XT:

- Meets the most stringent aerospace specifications
- Protects and prevents corrosion on sensitive alloys, including aerospace and nuclear materials
- Free of chlorine, formaldehyde releasers, phenols, boron and secondary amines
- Dramatically extends useful life without the need for tank-side biocides or fungicides
- Low foaming for todays demanding high-pressure, high-volume applications
- Optimised combination of cooling and lubricity for titanium, aluminium, steel, stainless steel and Inconel® machining applications
- Excellent alternative to milky soluble oils on high-silica aluminium alloys
- Provides superior corrosion inhibition on all ferrous and nonferrous metals
- Keeps parts and machines very clean to reduce maintenance and production time

MicroSol 590XT especially for:

Applications — band sawing, belt grinding, Blanchard grinding, corrosion inhibition, cutting, cylindrical form grinding, double disc grinding, drilling, grinding, high-pressure, high-volume, in-feed centreless grinding, internal grinding, plain grinding, reaming, roll threading, surface grinding, surface milling, tapping, thread forming, through-feed centreless grinding and turning

Metals — 6000 series aluminium, aerospace aluminium alloys, aluminium, brass, bronze, cast aluminium, cast iron, composites, copper, exotic alloys, glass, heat-treated steel, high-carbon steel, high-nickel alloys, Inconel®, nonferrous metals, stainless steels, steels, titanium and wrought aluminium

Industries — aerospace

MicroSol 590XT is free of — boron, chlorine, DCHA, formaldehyde releasers, phenols and secondary amines

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Application Guidelines

- MicroSol 590XT performs well where traditional soluble oils may not cool sufficiently.
- In mixed-metal situations, concentration control is critical to fight galvanic corrosion (7.5% plus).
- Running at or above 7.5% offers the best sump life and corrosion inhibition on cast iron chips.
- MicroSol 590XT is not recommended for use on very reactive metals such as magnesium.
- For additional product application information, including performance optimisation, please contact your Master Fluid Solutions' Authorised Distributor at https://www.masterfluids.com/eu/en/distributors/index.php, your District Sales Manager, or call our Tech Line at +49 211 41 72 8 -900.

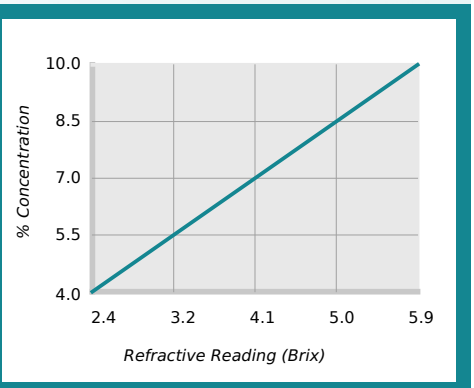
Physical Properties Typical Data

Colour (Concentrate)	Light brown
Colour (Working Solution)	Clear to white microemulsion
Odour (Concentrate)	Mild amine
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D93-08)	> 100°C
pH (Concentrate as Range)	9.5 - 9.7
pH (Typical Operating as Range)	8.8 - 9.7
Coolant Refractometer Factor	1.7
Titration Factor (CGF-1 Titration Kit)	0.75
Digital Titration Factor	0.0202

Recommended Metalworking Concentrations

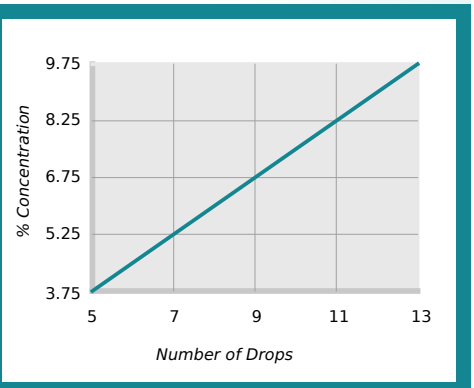
Light Duty	4.0% - 6.5%
Moderate Duty	6.5% - 8.5%
Heavy Duty	8.5% - 10.0%
Design Concentration Range	4.0% - 10.0%

Concentration by % Brix



% Concentration = Refractive Reading x Refractive Factor
Coolant Refractometer Factor % Brix = 1.7

Concentration by Titration



% Concentration = No. of Drops x Titration Factor
Titration Factor = 0.75

Health and Safety

Request SDS

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Mixing Instructions

- Recommended usage concentration in water: 4.0% - 10.0%.
- To help ensure the best possible working solution, add the required amount of concentrate to the required amount of water (never the reverse) and stir until uniformly mixed.
- Use premixed coolant as makeup to improve coolant performance and reduce coolant purchases. The makeup you select should balance the water evaporation rate with the coolant carryout rate. Use our Coolant Makeup Calculator to find the best ratio for your machine: apps.masterfluids.com/makeup/.
- Use mineral-free water to improve sump life and corrosion inhibition while reducing carryoff and concentrate usage.

Ordering Information

20-litre pail

204-litre drum

1000-litre IBC

Additional Information

- Use Master STAGES™ Whamex™ for a quick and thorough precleaning of your machine tool and coolant system.
- Consult Master Fluid Solutions before using on any metals or applications not specifically recommended.
- This product should not be mixed with other metalworking fluids or metalworking fluid additives, except as recommended by Master Fluid Solutions, as this may reduce overall performance, result in adverse health effects, or damage the machine tool and parts. If contamination occurs, please contact Master Fluid Solutions for recommended action.
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https://2trim.us/di/?i=eu_en_MS590XT

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