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 utilizes 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 favorite 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 aluminum, 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 and has received many aerospace approvals
- Protects and prevents corrosion on sensitive alloys, including aerospace and nuclear materials
- Free of chlorine, triazine, 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
- Optimized combination of cooling and lubricity for titanium, aluminum, steel, stainless steel, and Inconel® machining applications
- Excellent alternative to chlorinated soluble oils on high-silica aluminum 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 centerless grinding, internal grinding, plain grinding, reaming, roll threading, surface grinding, surface milling, tapping, thread forming, through-feed centerless grinding, and turning

Metals — 6000 series aluminum, aerospace aluminum alloys, aluminum, brass, bronze, cast aluminum, 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 aluminum

Industries — aerospace

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

Master Fluid SOLUTIONS™

TRIM™ MicroSol™ 590XT

Advanced Technology Aerospace Semisynthetic

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 optimization, please contact your Master Fluid Solutions' Authorized Distributor at https://www.masterfluids.com/th/en-th/distributors/index.php or your District Sales Manager, or email us at thailand-info@masterfluids.com.

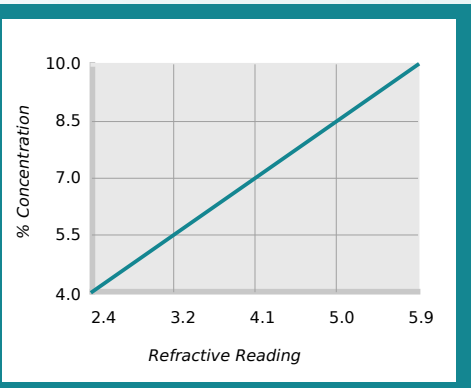
Physical Properties Typical Data

Color (Concentrate)	Amber
Color (Working Solution)	Clear to white microemulsion
Odor (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
V.O.C. Content (ASTM E1868-10)	99 g/l

Recommended Metalworking Concentrations

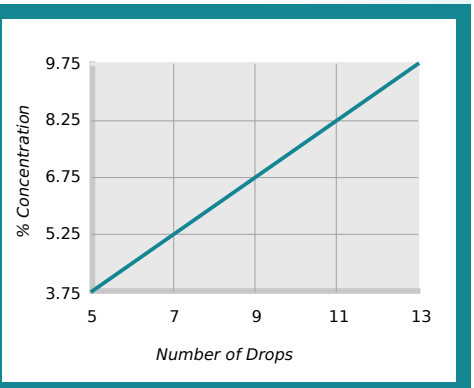
Light Duty	4.0% - 6.5%
Moderate Duty	6.5% - 8.5%
Heavy Duty	8.5% - 10.0%
Design Concentration Range	4.0% - 10.0%

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

TRIM™ MicroSol™ 590XT

Advanced Technology Aerospace Semisynthetic

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-liter pail

204-liter 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.
- TRIM™ and MicroSol™ are trademarks of Master Chemical Corporation d/b/a Master Fluid Solutions.
- Master STAGES™ and Whamex™ are trademarks of Master Chemical Corporation d/b/a Master Fluid Solutions.
- The information herein is given in good faith and believed current as of the date of publication and should apply to the current formula version. Because conditions of use are beyond our control, no guarantee, representation, or warranty expressed or implied is made. Consult Master Fluid Solutions for further information. For the most recent version of this document, please go to this URL:

https://2trim.us/di/?i=th_en-th_MS590XT

333/8 Moo 9, Bangpla, Bangplee
Samutprakarn, 10540
Thailand
+662 136 6319

thailand-info@masterfluids.com

masterfluids.com/th/en-th/