



TRIM® MicroSol® 590XT

Advanced Technology Aerospace Semisynthetic

GENERAL DESCRIPTION

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.

ADVANTAGES

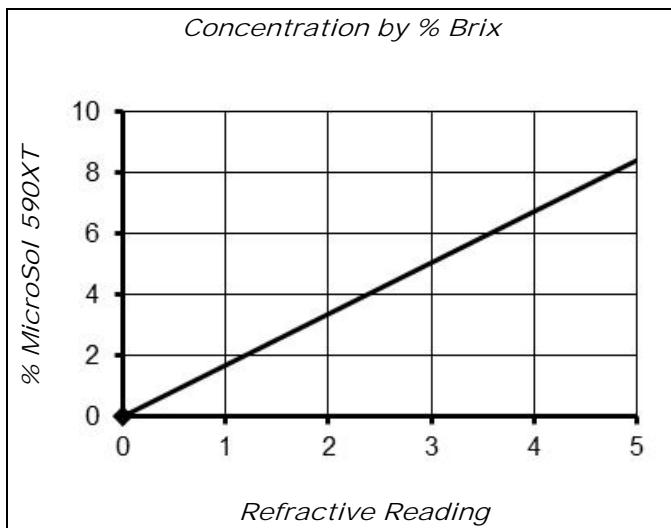
- Meets the most stringent aerospace specifications
- Protects and prevents corrosion on sensitive alloys, including aerospace and nuclear materials
- Free of chlorine, triazine, formaldehyde releasers, phenols, boron, DCHA, and secondary amines
- Dramatically extends useful life without the need for 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

APPLICATION GUIDELINES

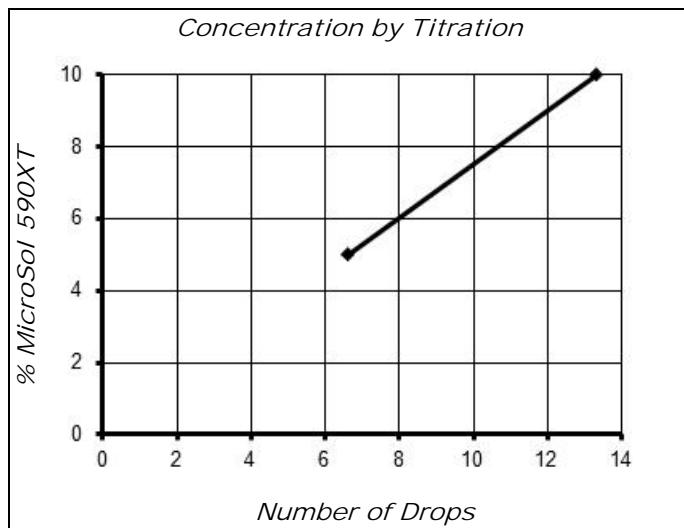
- MicroSol 590XT performs well where traditional soluble oils may not cool sufficiently.
- In mixed-metal situations, concentration control is critical to fight galvanic corrosion (7.5% plus).
- Running at or above 7.5% offers the best sump life and corrosion inhibition on cast iron chips.
- MicroSol 590XT is not recommended for use on very reactive metals such as magnesium.
- For additional product applications information including performance optimization, please contact your Master Chemical Authorized Distributor at 2trim.us/distributors.php, your District Sales Manager, the Tech Line at 1-800-537-3365, or visit our web site at www.masterchemical.com.

PHYSICAL PROPERTIES (TYPICAL DATA)

Color (Concentrate)	Amber	Flash Point	>212°F (>100°C) (ASTM D93-08)
Color (Working Solution) ...	Clear to white Microemulsion	pH (Typical Operating as a Range)	8.8-9.7
Odor.....	Mild Amine	Coolant Refractometer Factor % Brix	1.7
Form	Liquid	Titration Factor (CGF-1 Titration Kit)	0.75



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



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

RECOMMENDED METALWORKING CONCENTRATIONS

- Light-duty machining and grinding.....5%-7%
- Moderate-duty machining.....7%-10%
- Design concentration range.....4%-10%

MIXING INSTRUCTIONS

- 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. Adding makeup coolant at one-third to one-half of the desired working concentration will generally maintain the proper sump concentration.
- Use mineral-free water to improve sump life and corrosion inhibition while reducing carryoff and concentrate usage.
- Microemulsion products, like MicroSol 590XT, work best if they are mixed by adding the coolant concentrate to the water (never the reverse) to help insure that the best possible microemulsion is formed.

HEALTH AND SAFETY

See the most recent SDS at [2trim.us/s/?i=1721-en-US-US](http://trim.us/s/?i=1721-en-US-US).



NOTES

- Use Master STAGES™ Whamex XT™ for a quick and thorough pre-cleaning of your machine tool and coolant system.
- Before using on any metals or applications not specifically recommended, consult Master Chemical.
- This product is designed to be added directly on top of MicroSol 590XT but should not be mixed with other metalworking fluids or metalworking fluid additives, except as recommended by Master Chemical Corporation, as this may reduce overall performance, result in adverse health effects, or damage the machine tool and parts. If contamination occurs, please contact Master Chemical Corporation for recommended action.
- MicroSol 590XT working solution is a clear to white microemulsion and is not available with dye.
- Packaging: North America—1-gallon jug, 5-gallon pail, 54-gallon drum, and 270-gallon tote bin.
- Packaging: Europe/Asia—20-litre pail, 204-litre drum, and 1,000-litre IBC.

The information herein is given in good faith and believed current as of the date of this Data & Information sheet 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 Chemical Corporation for further information. For the most recent version of this document, please go to this URL: [2trim.us/s/?i=1721-en-US-US](http://trim.us/s/?i=1721-en-US-US)

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