TRIM® MicroSol® 555

High-lubricity, Semisynthetic Metalworking Fluid

TRIM MicroSol 555 is a high-lubricity, semisynthetic microemulsion coolant optimized for high-volume production environments. The formula offers the performance of a heavy-duty soluble oil with the cleanliness of a semisynthetic. It provides excellent cooling and mechanical lubricity, along with the machine-friendly characteristics you expect from a premium TRIM coolant.

Automotive Mold Manufacturer Eliminates Machine Fires with MicroSol® 555



A leading manufacturer of molds and plastic components for the automotive industry has a 40 machine operation featuring seven UNISIG® gun drills used primarily for milling. UNISIG is one of the largest producers of deep hole drilling machines.

Choose MicroSol 555:

- Excellent alternative to chlorinated soluble oils on high-silica aluminum alloys
- Has exceptional sump life without the use of tank-side additives
- Reduces oil mist and residues often associated with high-lubricity alternatives
- Provides superior corrosion inhibition on all ferrous and nonferrous metals
- Forms stable microemulsion in hard-water environments
- Keeps machines very clean while leaving a soft fluid film for ease of cleaning and reduced maintenance
- Uses standard metalworking recycling and disposal techniques

MicroSol 555 especially for:

Applications — band sawing, cooling, cylindrical grinding, drilling, form cylindrical grinding, internal grinding, plain grinding, reaming, roll threading, surface grinding, surface milling, tapping, thread forming, through-feed centerless grinding, and turning

Materials — aluminum, cast aluminum, cast iron, composites, copper alloys, exotic alloys, ferrous metals, magnesium alloys, nonferrous metals, plastics, stainless steels, steels, and wrought aluminum

Industries — aerospace and medical

MicroSol 555 is free of — boron, formaldehyde releasers, nitrites, phenols, and sulfurized EP additives

Master Fluid SOLUTIONS®

TRIM® MicroSol® 555

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Application Guidelines

- 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.
- For additional product application information, including performance optimization, please contact your Master Fluid Solutions' Authorized Distributor at https://www.masterfluids.com/na/en-us/distributors/index.php, your District Sales Manager, or call our Tech Line at 1-800-537-3365.

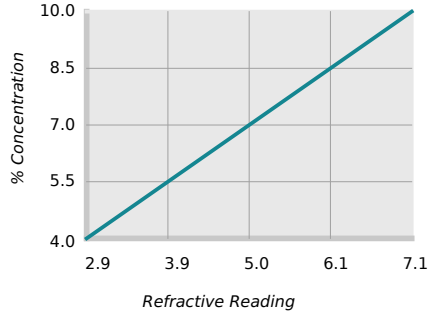
Physical Properties Typical Data

Color (Concentrate)	Amber
Color (Working Solution)	White translucent
Odor (Concentrate)	Mild amine
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D93-08)	> 216°F
pH (Concentrate as Range)	10.0 - 10.5
pH (Typical Operating as Range)	9.8 - 10.2
Coolant Refractometer Factor	1.4
V.O.C. Content (ASTM E1868-10)	86 g/l

Recommended Metalworking Concentrations

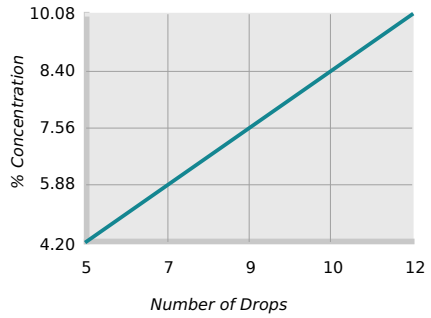
Light Duty	4.0% - 6.5%
Moderate Duty	6.5% - 8.5%
Heavy Duty	8.5% - 10.0%
Design Concentration Range	4.0% - 10.0%

Concentration by % Brix



% Concentration = Refractive Reading x Refractive Factor
Coolant Refractometer Factor % Brix = 1.4

Concentration by Titration



% Concentration = No. of Drops x Titration Factor
Titration Factor = 0.84

Request SDS

TRIM® MicroSol® 555

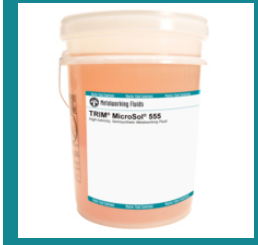
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Mixing Instructions

- 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.



1-gallon jug
SKU: MS555-1G
UPC-12: 641238004257



5-gallon pail
SKU: MS555-5G
UPC-12: 641238004240



54-gallon drum
SKU: MS555-54G
UPC-12: 641238004233



270-gallon tote
SKU: MS555-270G
UPC-12: 641238004295

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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