MicroSol® 485

Long-life Ferrous Semisynthetic

TRIM® MicroSol® 485 is a long life semisynthetic, microemulsion coolant designed for ferrous metalworking operations and optimized for difficult working environments associated with cast iron. MicroSol 485 prevents leaching of elemental iron and thus eliminates clinking and oxidation of ferrous microfines. Formula delivers extended sump life versus previous generation semisynthetics. It provides excellent cooling along with the machine-friendly characteristics you expect from TRIM® coolants. MicroSol 485 is value-priced and specifically designed for use on ferrous metals.

A case for MicroSol 485:
An Iowa machine shop has been in the business of drilling and tapping steel forgings for decades. Recently, they experienced their cutting fluids going bad in the sump. Master Fluid Solutions recommended they test the MicroSol 485. The results speak for themselves: the customer sees better wetted parts, much longer sump life, and has no problems with corrosion on parts or foul shop odors. They’re very satisfied with MicroSol 485’s long sump life, overall performance, and economical price. AND they report a 30% overall reduction in coolant cost.

Choose MicroSol 485:
- The most cost conscience MicroSol® offering
- Dramatically extends useful life without the need for tank-side biocides or fungicides
- Provides superior corrosion inhibition on cast iron and eliminates “hot chip” and clinking problems
- 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 485 especially for:
Applications — band sawing, cutting, cylindrical form grinding, drilling, grinding, plain grinding, reaming, roll threading, surface grinding, surface milling, tapping, thread forming, through-feed centerless grinding, and turning
Metals — cast iron, ferrous metals, steels, and tool steels
Industries — automotive, compressor, diecast, and job shop
MicroSol 485 is free of — chlorinated EP additives, nitrites, phenols, sulfurized EP additives, and triazine
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Application Guidelines
- MicroSol 485 is designed for moderate to light-duty machining on ferrous metals.
- Running at or above 6%; offers the best sump life and corrosion inhibition on cast iron chips.
- 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.2trim.us/distributors.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): Light amber
- Odor (Concentrate): Mild
- Form (Concentrate): Liquid
- Flash Point (Concentrate) (ASTM D93-08): > 199°F
- pH (Concentrate as Range): 10.2 - 10.6
- pH (Typical Operating as Range): 9.6 - 10.2
- Coolant Refractometer Factor: 1.7
- Titration Factor (CGF-1 Titration Kit): 0.55
- Digital Titration Factor: 0.0160
- V.O.C. Content (ASTM E1868-10): 183 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 = 0.55

Health and Safety

See the most recent SDS at https://2trim.us/s/?i=1017-0-en-US-US
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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.masterfluidsolutions.com/makeup/.
- Use mineral-free water to improve sump life and corrosion inhibition while reducing carryoff and concentrate usage.

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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