# TRIM™ MicroSol™ 642RX

***High-lubricity, Low-foam, Medical Grade Microemulsion***

TRIM MicroSol 642RX is specifically formulated for the medical device industry. This product is low-foaming, has high-lubricity, a long sump life, is clean running, and is free of animal derived raw materials. MicroSol 642RX can be run with many operations on titanium, stainless steel, copper, aluminum alloys, and exotic alloys. This is the fluid of choice for medical instruments, ortho instruments, prosthetic devices, endoscopy, and surgical tools.

## *MicroSol*



***For ultimate performance:***

*TRIM™ MicroSol™ semisynthetic microemulsion coolants deliver high-performance lubricity and ultimately lower costs. Achieve precision parts, exceptional tool life, extended sump life, assured regulatory compliance, and greater profitability with the MicroSol product just right for your production.*

*Designed to meet the rigorous demands of the aerospace, medical, automotive, and high production, precision parts manufacturing industries, there's a MicroSol to answer your concerns, ramp up your production, and boost your bottom line.*

## Choose MicroSol 642RX:

- Compatible with cobalt alloys
- Conformance to EH&S requirements for the medical industry
- Improved lubricity for longer tool life
- Extended useful life without the need for tank-side biocides or fungicides
- Halogen free formulation
- Low foaming for today’s demanding high-pressure, high-volume applications
- Excellent alternative to chlorinated soluble oils on high-silica aluminum alloys
- Superior corrosion inhibition on all ferrous and nonferrous metals
- High machine cleanliness while leaving a soft fluid film for ease of cleaning and reduced maintenance
- Ease of disposal with no special disposal or recycling techniques or requirements

## MicroSol 642RX especially for:

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

**Materials** — 6000 series aluminum, aerospace aluminum alloys, brass, bronze, cast aluminum, cast iron, composites, copper, copper alloys, exotic alloys, glass, heat-treated steel, high-carbon steel, high-nickel alloys, high-silica aluminum alloys, nonferrous metals, plastics, stainless steels, steels, titanium, and wrought aluminum

**Industries** — aerospace, automotive, bearing, compressor, diecast, energy, firearms, green, job shop, machine tool, and medical

**MicroSol 642RX is free of —** animal derived materials, chlorinated EP additives, formaldehyde releasers, halogens, nitrites, NPEs, phenols, sulfonates, and sulfurized EP additives

Master Fluid SOLUTIONS™

# TRIM™ MicroSol™ 642RX

***High-lubricity, Low-foam, Medical Grade Microemulsion***

## Application Guidelines

- Performs well where traditional soluble oils may not cool sufficiently.
- In mixed-metal situations, concentration control is critical to fight galvanic corrosion (concentration >7.5% is recommended).
- Running at or above 7.5% 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.masterfluids.com/ap/en-ap/distributors/index.php, your District Sales Manager, or email us at apac-info@masterfluids.com.

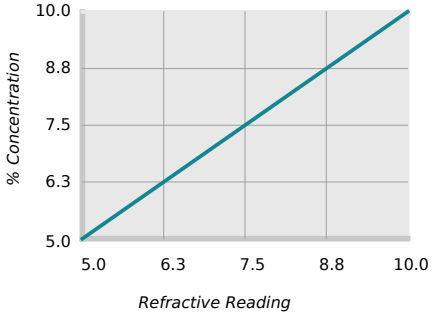
## Physical Properties Typical Data

| | |
|---|---|
| Color (Concentrate) | Light Yellow to Amber |
| Color (Working Solution) | White microemulsion |
| Odor (Concentrate) | Mild amine |
| Form (Concentrate) | Liquid |
| Flash Point (Concentrate) (ASTM D93-08) | > 107°C |
| pH (Concentrate as Range) | 9.5 - 10.0 |
| pH (Typical Operating as Range) | 8.8 - 9.6 |
| Coolant Refractometer Factor | 1.0 |
| V.O.C. Content (ASTM E1868-10) | 41 g/l |

## Recommended Metalworking Concentrations

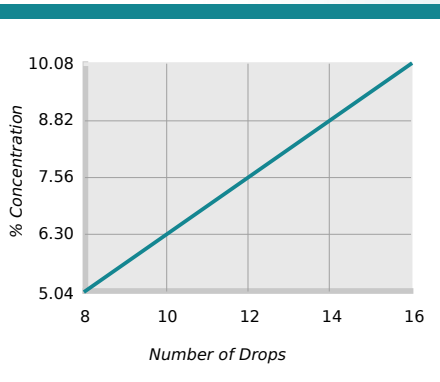
| | |
|---|---|
| Light Duty | 5.0% - 6.5% |
| Moderate Duty | 6.5% - 8.5% |
| Heavy Duty | 8.5% - 10.0% |
| Design Concentration Range | 5.0% - 10.0% |

## Concentration by % Brix




% Concentration = Refractive Reading x Refractive Factor
Coolant Refractometer Factor % Brix = 1.0

## Concentration by Titration




% Concentration = No. of Drops x Titration Factor
Titration Factor = 0.63

## Health and Safety

Request SDS

# TRIM™ MicroSol™ 642RX

***High-lubricity, Low-foam, Medical Grade Microemulsion***

## Mixing Instructions

- Recommended usage concentration in water: 5.0% - 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-liter tote



## 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 registered 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=ap_en-ap_MS642RX

B-41, Chakan MIDC Phase - 2, Village Bhambuli,
Post Vasuli, Tal. Khed, Pune -410 501.
Maharashtra,
India

india-info@masterfluids.com

masterfluids.com/ap/en-ap/