E905

High-lubricity, extreme pressure emulsion

TRIM® E905 is a high quality, high lubricity universal soluble oil which requires minimal maintenance in even the most demanding fluid management systems. TRIM E905 has broad application in machining and grinding of a broad range of materials. The high levels of both chemical and mechanical lubricity in this product handle the tough machining and grinding jobs. The stable and predictable performance of TRIM E905 makes it a first choice for high quality, consistent parts manufacturing.

Soluble Oils

Geared up for production:

With superior mechanical lubricity and a higher oil content, TRIM® emulsions provide a greater boundary layer between the tool and the material. Emulsions are ideal for lower, less than 600 SFPM, applications such as broaching, reaming, deep hole drilling, drilling, tapping and centerless grinding.

Emulsions work well for machining copper, yellow metals, steel alloys, cast aluminiums, wrought aluminiums and tough-to-machine titanium and nickel-based alloys.

Choose E905:

- A very universal product that works well in a wide range of operations
- Tried and tested extreme pressure (EP) additive controls built-up edge in tough operations
- Extremely hard water tolerant
- Very low foam even at high pressures
- Extremely fine soluble oil emulsion reduces carry-off for low total operating cost
- Fast wetting to get the fluid to the point of cut and fully coat the work piece and chips for superior corrosion prevention
- Protects machine and tool surfaces while also preventing sticky ways, chucks, tool holders and fixtures
- Easily recycled or disposed of without special handling or equipment

E905 especially for:

Applications — boring, deep hole drilling, drilling, heavy-duty machining center work, high-pressure, high-volume, high-speed milling, high-speed turning, milling, reaming, roll threading, sawing, tapping, thread forming, thread rolling and turning

Metals — aluminium alloys, cast iron, nickel alloys, stainless steels, steels and yellow metals

Industries — automotive, energy and general industry

E905 is free of — formaldehyde releasers, nitrites, phenolic compounds and sulphurised EP additives
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**Application Guidelines**
- TRIM E905 will run effectively for long periods without the need for costly additives.
- It can run at lower concentrations for higher speed operations (where heat removal is the key issue).
- Higher concentrations are recommended on soft, gummy materials and for lower speed operations where friction reduction and control of built-up edge are critical.
- Concentrations above 7% provide the best sump life.
- For additional product application information, including performance optimisation, please contact your Master Fluid Solutions’ Authorised Distributor at https://www.2trim.us/distributors.php, your District Sales Manager, or call our Tech Line at +49 211 77 92 85 - 13.

**Physical Properties Typical Data**
- Colour (Concentrate): Amber
- Odour (Concentrate): Mild amine
- Form (Concentrate): Liquid
- Flash Point (Concentrate) (ASTM D93-08): > 160°C
- pH (Typical Operating as Range): 8.7 - 9.7
- Coolant Refractometer Factor: 1.0

**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**

![Graph showing concentration by refractive index](image)

\[
\% \text{ Concentration} = \text{Refractive Reading} \times \text{Refractive Factor}
\]

Coolant Refractometer Factor % Brix = 1.0

**Health and Safety**
For further information, see the most recent SDS which is available directly from Master Fluid Solutions or from your Master Fluid Solutions’ Authorised Distributor.
**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.masterfluidsolutions.com/makeup/](http://apps.masterfluidsolutions.com/makeup/).
- Use mineral-free water to improve sump life and corrosion inhibition while reducing carryoff and concentrate usage.

**Ordering Information**

- 20-litre pail
- 204-litre 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® is a registered trademark of Master Chemical Corporation d/b/a Master Fluid Solutions.
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