TRIM™ E711

Copper Alloy Machining Fluid

TRIM E711 is a high quality soluble oil designed primarily for the machining and grinding of yellow metals and copper alloys.

Emulsions

Geared up for production:

With superior lubricity and a higher oil content, TRIM emulsions provide a greater boundary layer between the tool and the material, and are ideal for heavy-duty applications such as broaching, reaming, deep hole drilling, drilling, tapping, and centerless grinding.

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

Choose E711:

- Rejects tramp oil to extend sump life
- Will not stain or darken brass or other yellow metal alloys
- Easy recycling or disposal with conventional techniques and equipment
- Coolant is easily removed with water, working solution or aqueous cleaners
- Very stable formula provides long operational life with consistent performance
- Will not form the sticky, water insoluble residues commonly seen when machining yellow metals
- Fine particle size emulsion reduces carryoff and facilitates getting the fluid to the point of cut
- Protects machine and tool surfaces while also preventing sticky ways, chucks, tool holders, and fixtures
- Compatible with all ferrous and nonferrous materials but is specifically designed for "free machining" yellow metals
- Provides sufficient mechanical lubricity to run well in older "Swiss" style machines as well as in modern high speed CNC machines

E711 especially for:

Applications — broaching, cutting, gear hobbing, and turning

Metals — aluminum, brass, copper, ferrous metals, nonferrous metals, and stainless steels

Industries — automotive, general industry, and job shop

E711 is free of — boron and formaldehyde releasers

Master Fluid SOLUTIONS™

TRIM™ E711

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Application Guidelines

- Concentrations above 5% provide the best sump life.
- 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.
- 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.

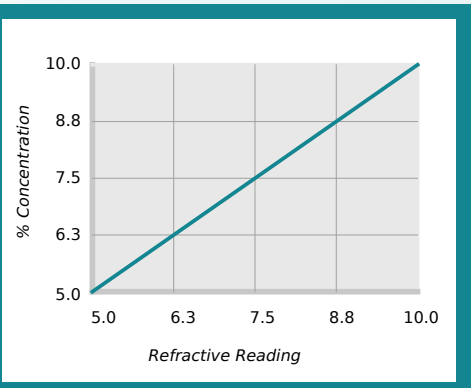
Physical Properties Typical Data

Color (Concentrate)	Brown
Color (Working Solution)	White emulsion
Odor (Concentrate)	Mild
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D92-90)	> 100°C
pH (Typical Operating as Range)	8.7 - 9.2
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



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

Health and Safety

Request SDS

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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

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 trademark of Master Chemical Corporation d/b/a Master Fluid Solutions.
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- 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_E711

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