TRIM® C270

High-performance Synthetic

TRIM C270 is a state-of-the-art synthetic coolant. C270 provides excellent cooling and chip settling, good tramp oil rejection, and machine cleanliness, and meets the needs of the modern job shop for a single premium synthetic coolant for virtually all machining operations.

TRIM® Coolant Speeds Up Production of Valuable Compressors Needed to Fight COVID-19 Pandemic



Due to the COVID-19 pandemic, medical centers and pharmacies have had an unprecedented need for refrigeration units to help store lab specimens, medications, and vaccines. Therefore, refrigerator manufacturers have required a high volume of compressors on extremely short notice.

The demand has become so high that several companies - including plants based in Asia producing bearings and rollers for rotary compressors - have seen their lead time increase from two to eight weeks, significantly slowing down the production of these life-saving components.

Aerospace Approvals

Company	Specification
GE Aerospace	No specification available
Raytheon Technologies/Collins Aerospace/Pratt & Whitney	PMC 9392
Rolls-Royce	CSS 130
SAFRAN	PR6300

Choose C270:

- C270 is compatible with a very wide range of materials including: cast iron, steels, and copper alloys, as well as plastics and composites
- Provides excellent corrosion inhibition on all common ferrous alloys
- Does a great job in form grinding, drilling, tapping, and reaming operations without chlorine or sulfur-based EP additives
- Extremely low carryoff for very low total operation costs
- Very low foam and mist
- Keeps your machines clean while leaving a soft, fluid film that protects the bare metal parts. This residual film is easily resoluble in coolant working solution to facilitate easy machine cleaning and minimize the buildup of sticky residues that can hold machine-destroying chips
- Exceptional sump life and very good tramp oil rejection
- A very low initial odor level which usually disappears after one-to-two days

C270 especially for:

Applications — band sawing, belt grinding, Blanchard grinding, cooling, corrosion inhibition, creep-feed grinding, cutting, cylindrical grinding, double disc grinding, drilling, form cylindrical grinding, form grinding, grinding, internal grinding, plain grinding, reaming, surface grinding, surface milling, tapping, and turning

Materials — cast iron, composites, exotic alloys, nickel alloys, plastics, stainless steels, steels, titanium, and tool steels

Industries — aerospace, automotive, compressor, energy, machine tool, and medical

C270 is free of — animal derived materials, chlorinated EP additives, DCHA, nitrites, NPEs, phosphorous, siloxane, and sulfurized EP additives

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Application Guidelines

- The harder you work this product the better the results will be.
- C270 is not recommended in machine tools that rely on the splash of the coolant to lubricate the mechanical portions of the machine tool, e.g. older screw machines, etc.
- C270 is not recommended on materials like magnesium or zirconium without special precautions.
- This product is a superior cleaning agent so it may "wash out" dirt and residues when a machine is first charged; a thorough cleaning of older machines is required when installing this product the first time.
- The minimum recommended concentration is 5% on cast iron and 4% on steel.
- Concentrations above 7.5% provide excellent corrosion inhibition, tool life, and sump life; however, the best concentration for your operation should be determined by on-site experience.
- 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.

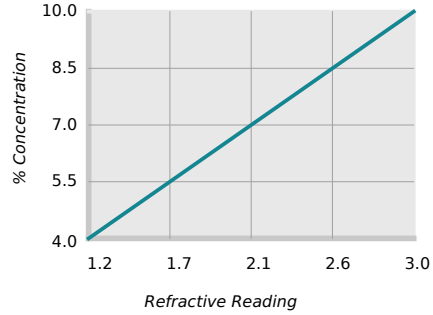
Physical Properties Typical Data

Color (Concentrate)	Colorless to Amber
Color (Working Solution)	Colorless
Odor (Concentrate)	Mild, sweet
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D93-08)	> 226°F
pH (Concentrate as Range)	9.0 - 9.3
pH (Typical Operating as Range)	8.7 - 9.2
Coolant Refractometer Factor	3.3
V.O.C. Content (ASTM E1868-10)	110 g/l

Recommended Metalworking Concentrations

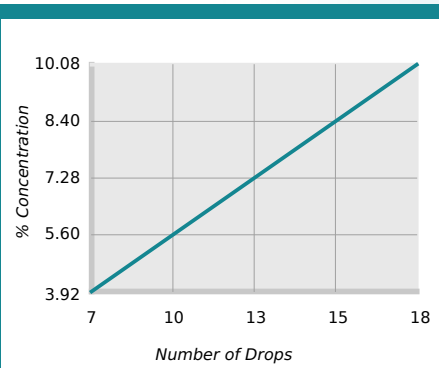
Light Duty	4.0% - 6.5%
Moderate Duty	6.5% - 8.5%
Heavy Duty	8.5% - 10.0%
Design Concentration Range	4.0% - 10.0%

Concentration by % Brix



% Concentration = Refractive Reading x Refractive Factor
Coolant Refractometer Factor % Brix = 3.3

Concentration by Titration



% Concentration = No. of Drops x Titration Factor
Titration Factor = 0.56

Request SDS

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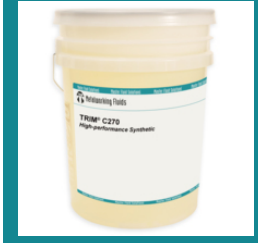
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Mixing Instructions

- 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: C270-1G
UPC-12: 641238019886



5-gallon pail
SKU: C270-5G
UPC-12: 641238001249



54-gallon drum
SKU: C270-54G
UPC-12: 641238001256



270-gallon tote
SKU: C270-270G
UPC-12: 641238034001

Additional Information

- Use Master STAGES™ Whamex XT™ 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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501 West Boundary Street
Perrysburg, OH 43551-1200
United States
+1 419-874-7902

info@masterfluids.com

masterfluids.com/na/en-us/