TRIM® SC620

Premium Low-oil Semisynthetic

TRIM SC620 is a high-lubricity, low-foam, low-odor, semisynthetic cutting and grinding fluid concentrate for high performance machining and grinding environments. SC620 uses a proprietary blend of mineral oil, EP-additives, and lubricity agents to control built-up edge, improve tool life, and deliver the finishes historically achieved using soluble oils. This unique balance of lubricity, wetting, and cooling characteristics is engineered to improve semisynthetic performance on stainless steel, aluminum alloys, and other high-end materials.

Drivetrain Components Manufacturer Reduces Coolant Spending by $186K with Master Fluid Solutions®



A drivetrain components manufacturer, specializing in automotive torque converters, primarily engages in turning applications with steel alloy. It operates three large central coolant systems: one at 30,000 gallons, one at 20,000 gallons, and one at 10,000 gallons. There are 100, 50, and 30 machines on each system, respectively. Its primary customers are large automotive manufacturers across the United States.

Choose SC620:

- Excellent sump life
- Eliminates foam problems associated with most semisynthetics
- Low oil content for reduced carry-off and lower residue
- Versatile enough to maximize performance in most grinding, sawing, drilling, turning, and milling operations by simply varying concentrations with operation severity
- Provides excellent lubricity to do tapping and other "down-the-hole" operations in aluminum, and most steels, including many stainless steels
- Rejects tramp oils rapidly for easy recycling with good sump life
- Easily recycled or disposed of using conventional techniques and equipment

SC620 especially for:

Applications — band sawing, cutting, cylindrical grinding, down the hole work, drilling, form cylindrical grinding, grinding, in-feed centerless grinding, internal grinding, plain grinding, reaming, roll threading, surface grinding, surface milling, tapping, thread forming, through-feed centerless grinding, and turning

Materials — 6000 series aluminum, aluminum, aluminum alloys, cast aluminum, composites, copper alloys, exotic alloys, heat-treated steel, high-carbon steel, high-nickel alloys, nonferrous metals, plastics, stainless steels, steels, tool steels, and wrought aluminum

Industries — general industry and job shop

SC620 is free of — animal derived materials and NPEs

Master Fluid SOLUTIONS®

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Application Guidelines

- SC620 is a superior product for surface and cylindrical grinding as well as through-feed centerless grinding.
- High-torque operations or operations on soft material often benefit from higher concentrations.
- Concentrations in excess of 7% typically offer the best sump life and tool life. However, the optimum concentration for your operations is best determined by on-site testing.
- Not recommended for machines dedicated to cast iron due to potential for iron uptake.
- The minimum recommended concentration is 5% on steel.
- Not recommended on materials that chemically react with water (i.e. magnesium and zirconium).
- 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.

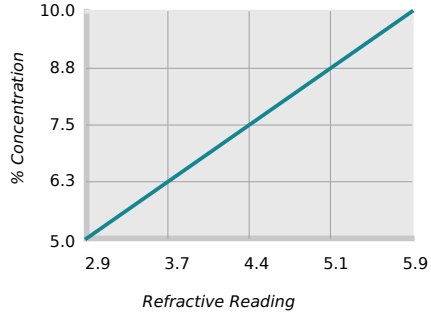
Physical Properties Typical Data

Color (Concentrate)	Yellow
Color (Working Solution)	Light yellow microemulsion
Odor (Concentrate)	Mild amine
Form (Concentrate)	Liquid
Flash Point (Concentrate) (ASTM D93-08)	> 199°F
pH (Concentrate as Range)	10.1 - 10.5
pH (Typical Operating as Range)	8.8 - 10.4
Coolant Refractometer Factor	1.7
V.O.C. Content (ASTM E1868-10)	149 g/l

Recommended Metalworking Concentrations

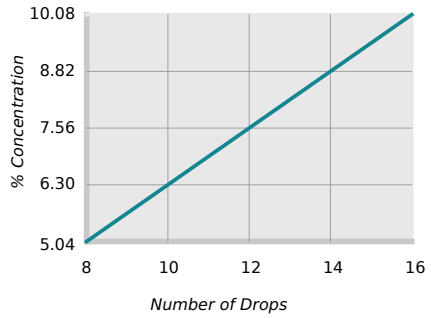
Light Duty	5.0% - 6.5%
Moderate Duty	6.5% - 8.5%
Heavy Duty	8.5% - 10.0%
Design Concentration Range	5.0% - 10.0%

Concentration by % Brix



% Concentration = Refractive Reading x Refractive Factor
Coolant Refractometer Factor % Brix = 1.7

Concentration by Titration



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

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.



1-gallon jug
SKU: SC620-1G
UPC-12: 641238071389



5-gallon pail
SKU: SC620-5G
UPC-12: 641238071372



54-gallon drum
SKU: SC620-54G
UPC-12: 641238071365



270-gallon tote
SKU: SC620-270G
UPC-12: 641238071402

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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https://2trim.us/di/?i=na_en-us_SC620

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