# TRIM SOL™ sf

## *General-purpose Emulsion - Siloxane Free*

TRIM™ SOL SF is a very high lubricity soluble oil which is suitable for machining and grinding a broad range of materials. The high levels of both chemical and mechanical lubricity in this product handle the tough machining of difficult materials such as stainless steel, Inconel® and titanium.

## *Soluble Oils*



***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 aluminiums, wrought aluminiums and tough-to-machine titanium and nickel-based alloys.*

## *Aerospace Approvals*

| Company | Specification |
|---|---|
| Lockheed Martin/Sikorsky | 42-0080-830 |
| SAFRAN | PR6300 |

## Choose SOL sf:

- A very universal product that works well in a wide range of operations
- Compatible with aluminium, all steels and yellow metals
- Tried and tested extreme pressure (EP) additive controls built-up edge in tough operations
- Hard water tolerant
- Fine soluble oil emulsion reduces carry-off for low total operating cost
- Protects machine and tool surfaces while also preventing sticky ways, chucks, tool holders and fixtures
- Siloxane free
- Easily recycled or disposed of without special handling or equipment

## SOL sf especially for:

**Applications** — broaching, centreless grinding, drilling, gear hobbing, milling, sawing, surface grinding and turning

**Materials** — ferrous metals and nonferrous metals

**Industries** — aerospace, automotive, energy and general industry

**SOL sf is free of —** amines, boron, formaldehyde releasers, nitrites and siloxane

Master Fluid SOLUTIONS™

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## Application Guidelines

- Runs effectively for long periods without the need for costly additives.
- Compatible with all ferrous and nonferrous materials, but not normally intended for use on long runs of gray cast iron or grades 40 or 60 nodular iron.
- 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 the BUE are critical.
- Concentrations of 7% and higher provide the best sump life with this product.
- For additional product application information, including performance optimisation, please contact your Master Fluid Solutions' Authorised Distributor at https://www.masterfluids.com/eu/en/distributors/index.php, your District Sales Manager, or call our Tech Line at +49 211 41 72 8 -900.

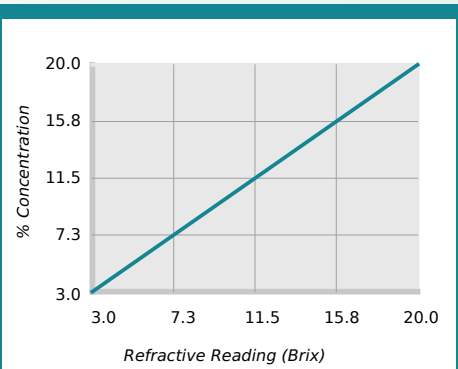
## Physical Properties Typical Data

| | |
|---|---|
| Colour (Concentrate) | Dark green |
| Odour (Concentrate) | Mild oil |
| Form (Concentrate) | Liquid |
| Flash Point (Concentrate) (ASTM D93-08) | > 100°C |
| pH (Typical Operating as Range) | 8.9 - 9.9 |
| Coolant Refractometer Factor | 1.0 |

## Recommended Metalworking Concentrations

| | |
|---|---|
| Light Duty | 3.0% - 6.5% |
| Moderate Duty | 6.5% - 8.5% |
| Heavy Duty | 8.5% - 20.0% |
| Design Concentration Range | 3.0% - 20.0% |

## 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: 3.0% - 20.0%.
- 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-litre pail

204-litre drum

1000-litre IBC

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## 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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