

STARCHEM

StarCool 103

Synthetic Cutting and Grinding Fluid Concentrate

GENERAL DESCRIPTION

StarCool 103 is a synthetic cutting and grinding fluid designed for ferrous materials, and particularly for those shops that prefer to use an oil-free product. **StarCool 103** provides excellent cooling in light duty machining and grinding of ferrous metals for “stand-alone” machines and central systems. **StarCool 103** is specifically formulated to provide superior rust control on cast irons, and other ferrous metals that are susceptible to corrosion in the metalworking environment.

APPLICATION

StarCool 103 is ideal for grinding applications such as centerless, ID, OD, and Blanchard grinding. It is extremely low foaming, making it an excellent choice for high pressure applications. **StarCool 103** can also be used for light duty machining of cast iron and mild steels. It also is ideal for steel tube mills due to its superior corrosion control and cooling properties. **StarCool 103** rejects hydraulic oils and other tramp oils to maintain outstanding weld-through properties from start to finish. This product is not recommended for use on nonferrous metals.

ADVANTAGES

- Superior cast iron corrosion control
- Excellent microbial control
- Extremely low foaming in high pressure and flood type applications
- Low odor and mist
- Rejects tramp oil for long sump life
- Oil free for easy recycling or disposal
- Low carry off for reduced concentrate usage
- Clear mix for good part visibility

StarCool 103 does not contain nitrite, chlorine, silicone, or phenolic biocides.

PHYSICAL PROPERTIES

Form	Clear Liquid	Specific Gravity (H₂O=1)	1.08
Boiling Point	212°F	pH (concentrate)	9.7
Flash Point (COC)	NA	Typical Operating pH Range	8.9 – 9.3
Solubility in Water	100% Miscible	Refractometer Factor	2.7

AVAILABILITY

StarCool 103 is available in 5-gallon pails, 55-gallon drums, and in bulk.

RECOMMENDED STARTING DILUTIONS

Centerless, ID, OD, Surface Grinding 5% - 7%
 Light Machining 6% - 8%

MIXING INSTRUCTIONS

Always add **StarCool 103** concentrate to water. Mix concentration can be determined using a refractometer.

StarCool 103 CONCENTRATION

Concentration	4% (1:25)	5% (1:20)	6% (1:17)	7% (1:14)	8% (1:12)	9% (1:11)
Refractometer reading	1.5	1.9	2.2	2.6	3.0	3.3

StarCool 103 is not recommended for use on magnesium or alloyed magnesium.

Using premixed concentrate as makeup will improve performance and reduce usage. The specific makeup concentration selected for your situation should balance the water evaporation rate with the coolant carry-off rate. Adding makeup concentrate at 20-30% of the desired working concentration will generally maintain the proper concentration in use. The use of deionized or mineral-free water will also improve performance, prolong sump life, and reduce concentrate usage.

HEALTH & SAFETY

The most recent MSDS is available from either **STARCHEM** or your authorized **STARCHEM** Distributor.

NOTES

- Consult **STARCHEM** before using this product on any metals or applications not specifically recommended
- Do not use any metalworking fluid additives except as recommended by **STARCHEM**
- The general description, recommended uses, application data and statements in the product literature are guidelines. Because this product may be used for a variety of applications over which the manufacturer has no control, the manufacturer assumes no liability for incidental, consequential, or direct damages of any kind, regardless of causes, including negligence.

CIMCOOL® FLUID TECHNOLOGY

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