

STARCHEM

StarCool 111

Synthetic Cutting and Grinding Fluid Concentrate

GENERAL DESCRIPTION

StarCool 111 is a high performance synthetic cutting and grinding fluid designed for ferrous materials, and particularly for those shops that prefer to use an oil-free product. It has been formulated to provide excellent lubricating, cooling, and corrosion inhibition properties in light to moderate duty grinding and machining of ferrous metals for “stand-alone” machines and central systems.

APPLICATION

StarCool 111 is ideal for grinding applications such as centerless, ID, OD, and Blanchard. It is extremely low foaming, making it an excellent choice for high pressure applications. **StarCool 111** can also be used for light to moderate duty machining of carbon steels, stainless steels, alloy steels, and nodular and malleable cast irons in milling and turning operations without chlorine or sulfur-based additives. **StarCool 111** is not recommended for non-ferrous metals.

ADVANTAGES

- Superior lubricity for ferrous metals without the use of EP additives
- Extremely low foaming in high pressure applications
- Excellent corrosion and microbial control
- Low odor and mist
- Clear mix for good part visibility
- Rejects tramp oil for long sump life
- Oil free for easy recycling or disposal
- Low carry off for reduced concentrate usage

StarCool 111 does not contain nitrite, chlorine, silicone, or phenolic biocides.

PHYSICAL PROPERTIES

Form	Clear Liquid	Specific Gravity (H₂O=1)	1.05
Boiling Point	212°F	pH (concentrate)	9.8
Flash Point (COC)	NA	Typical Operating pH Range	8.8 – 9.2
Solubility in Water	100% Miscible	Refractometer Factor	3.2

AVAILABILITY

StarCool 111 is available in 5-gallon pails, 55-gallon drums, and in bulk.

RECOMMENDED STARTING DILUTIONS

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

MIXING INSTRUCTIONS

Always add **StarCool 111** concentrate to water. Mix concentration can be determined using a refractometer.

StarCool 111 CONCENTRATION

Concentration	4% (1:25)	5% (1:20)	6% (1:17)	7% (1:14)	10% (1:10)
Refractometer reading	1.3	1.6	1.9	2.2	3.2

StarCool 111 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

3000 Disney Street
 Cincinnati, OH 45209
 Tel (513) 458-8199 Fax (513) 458-8179