

STARCHEM

StarCool™ 180AL

Synthetic Machining and Grinding Fluid Concentrate

GENERAL DESCRIPTION

StarCool 180AL is a moderate to heavy-duty synthetic machining and grinding fluid designed for both ferrous and nonferrous applications. Exceptional lubricity coupled with low mix pH makes this product an ideal choice for tough operations including most grades of aluminum.

APPLICATION

StarCool 180AL was designed to handle tough operations, such as tapping, that once required oil-based products or products containing chlorine-based or sulfur-based extreme pressure additives. This product is recommended for moderate to heavy-duty machining and grinding of most aluminum alloys, cast iron, nodular iron, carbon steels, stainless steels, titanium, and other exotic metals. It is not recommended for use on magnesium or alloyed magnesium.

StarCool 180AL is extremely low foaming, making it an excellent choice for high pressure applications.

ADVANTAGES

- Superior lubricity for excellent tool life and surface finish
- Extremely low foaming in high pressure applications
- Mild to the skin
- No smoke, low misting
- Clear mix for good part visibility
- Rejects tramp oil for long sump life
- Oil free for easy recycling or proper disposal
- Low carry off for reduced concentrate usage

StarCool 180AL does not contain nitrite, dicyclohexylamine, chlorine, silicone or phenolic biocides.

PHYSICAL PROPERTIES

Form	Clear Liquid	Specific Gravity (H₂O=1)	1.05
Boiling Point	212°F	pH (concentrate)	7.7
Flash Point (COC)	NA	Typical Operating pH	7.5
Solubility in Water	100% Miscible	Refractometer Factor	2.6

AVAILABILITY

StarCool 180AL is available in 5-gallon pails, 55-gallon drums, and in bulk.

RECOMMENDED STARTING DILUTIONS

Machining	5% - 10%
Grinding	5% - 10%

MIXING INSTRUCTIONS

Always add **StarCool 180AL** concentrate to water. Mix concentration can be determined using a refractometer.

StarCool 175AL CONCENTRATION

Concentration	4% (1:25)	5% (1:20)	6% (1:17)	7% (1:14)	8% (1:13)	9% (1:11)	10% (1:10)
Refractometer Reading	1.5	1.9	2.3	2.7	3.1	3.5	3.8

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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