

# STARCHEM

## StarCool 175AL

*Synthetic Cutting and Grinding Fluid Concentrate  
For Ferrous and Nonferrous Alloys*

### GENERAL DESCRIPTION

**StarCool 175AL** is an extremely heavy-duty synthetic cutting 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 on all grades of aluminum. **StarCool 175AL** is operator-friendly yet provides excellent corrosion inhibition properties.

### APPLICATION

**StarCool 175AL** 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 extremely heavy duty machining and grinding of all cast and wrought aluminum alloys, stainless steels, alloy steels, high-temperature alloys and other tough-to-work metals. **StarCool 175AL** is extremely low foaming, making it an excellent choice for high pressure applications.

### ADVANTAGES

- Superior lubricity
- Extremely low foaming in high pressure applications
- Mild to the skin
- 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 175AL** does not contain nitrite, dicyclohexylamine, chlorine, silicone or phenolic biocides.

### PHYSICAL PROPERTIES

<b>Form</b>	Clear Liquid	<b>Specific Gravity (H<sub>2</sub>O=1)</b>	1.07
<b>Boiling Point</b>	212°F	<b>pH (concentrate)</b>	8.2
<b>Flash Point (COC)</b>	NA	<b>Typical Operating pH Range</b>	7.8 – 8.0
<b>Solubility in Water</b>	100% Miscible	<b>Refractometer Factor</b>	1.6

**AVAILABILITY**

**StarCool 175AL** is available in 5-gallon pails, 55-gallon drums, and in bulk.

**RECOMMENDED STARTING DILUTIONS**

Milling, Turning 5% - 7%  
 Drilling Tapping, Reaming, Sawing 6% - 10%  
 Grinding 5% - 8%

Some extremely heavy-duty applications may require higher starting dilutions.

**MIXING INSTRUCTIONS**

Always add **StarCool 175AL** concentrate to water. Mix concentration can be determined using a refractometer.

**StarCool 175AL CONCENTRATION**

<b>Concentration</b>	<b>4%</b> <b>(1:25)</b>	<b>5%</b> <b>(1:20)</b>	<b>6%</b> <b>(1:17)</b>	<b>7%</b> <b>(1:14)</b>	<b>8%</b> <b>(1:13)</b>	<b>9%</b> <b>(1:11)</b>	<b>10%</b> <b>(1:10)</b>
<b>Refractometer Reading</b>	2.5	3.1	3.8	4.4	5.0	5.6	6.3

**StarCool 175AL** 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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