

# STARCHEM

## StarCool 135AL

*Synthetic Cutting and Grinding Fluid Concentrate  
For Aluminum Alloys*

### GENERAL DESCRIPTION

**StarCool 135AL** is a moderate-duty synthetic cutting and grinding fluid designed for aluminum applications, and particularly for shops that prefer to use an oil-free product. It has been formulated to provide excellent lubricating, cooling and corrosion inhibition properties for moderate-duty metalworking of aluminum alloys.

### APPLICATION

**StarCool 135AL** is recommended for general purpose machining and grinding of all cast and wrought aluminum alloys. **StarCool 135AL** can also be used for moderate-duty machining and grinding of carbon steels, stainless steels, and alloy steels. It is extremely low foaming, making it an excellent choice for high-pressure applications such as Blanchard grinding. **StarCool 135AL** provides excellent lubricity without chlorine or sulfur-based additives.

### ADVANTAGES

- Extremely low foaming in high pressure applications
- Excellent lubrication, 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 135AL** does not contain nitrite, chlorine, silicone, or phenolic biocides.

### PHYSICAL PROPERTIES

<b>Form</b>	Clear Liquid	<b>Specific Gravity (H<sub>2</sub>O=1)</b>	1.06
<b>Boiling Point</b>	212°F	<b>pH (concentrate)</b>	8.0
<b>Flash Point (COC)</b>	NA	<b>Typical Operating pH Range</b>	7.7 – 7.9
<b>Solubility in Water</b>	100% Miscible	<b>Refractometer Factor</b>	2.3

### AVAILABILITY

**StarCool 135AL** is available in 5-gallon pails, 55-gallon drums, and in bulk.

**RECOMMENDED STARTING DILUTIONS**

Aluminum Machining 5% - 6%  
 Ferrous Machining/Grinding 5% - 6%  
 Some tougher applications may require higher starting dilutions (7%-10%)

**MIXING INSTRUCTIONS**

Always add **StarCool 135AL** concentrate to water. Mix concentration can be determined using a refractometer.

**StarCool 135AL CONCENTRATION**

<b>Concentration</b>	<b>4% (1:25)</b>	<b>5% (1:20)</b>	<b>6% (1:17)</b>	<b>7% (1:14)</b>	<b>10% (1:10)</b>
<b>Refractometer reading</b>	1.7	2.2	2.6	3.0	4.3

**StarCool 135AL** 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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