

# STARCHEM

## StarCool 151

### *High Performance Synthetic Cutting and Grinding Fluid Concentrate*

#### GENERAL DESCRIPTION

**StarCool 151** 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 moderate to heavy duty grinding and machining of ferrous metals for “stand-alone” machines and central systems.

#### APPLICATION

**StarCool 151** is ideal for grinding applications such as centerless, ID, OD, Blanchard, and creep feed grinding. It is extremely low foaming, making it an excellent choice for high pressure applications. **StarCool 151** can also be used for moderate to heavy duty machining of carbon steels, stainless steels, alloy steels, titanium, nodular and malleable cast irons in milling, turning, drilling, boring, and broaching operations without chlorine or sulfur-based additives. **StarCool 151** is not recommended for copper or aluminum alloys.

#### 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 151** 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>	9.8
<b>Flash Point (COC)</b>	NA	<b>Typical Operating pH Range</b>	8.8 – 9.2
<b>Solubility in Water</b>	100% Miscible	<b>Refractometer Factor</b>	1.9

#### AVAILABILITY

**StarCool 151** is available in 5-gallon pails, 55-gallon drums, and in bulk.

**RECOMMENDED STARTING DILUTIONS**

Centerless, ID, OD, Surface Grinding	4% - 5%
Moderate Duty Machining	6% - 7%
Heavy Duty Machining	8% - 10%
Light Duty Stamping	10% - 15%

**MIXING INSTRUCTIONS**

Always add **StarCool 151** concentrate to water. Mix concentration can be determined using a refractometer.

**StarCool 151 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>10%</b> <b>(1:10)</b>	<b>15%</b> <b>(1:6.6)</b>
<b>Refractometer reading</b>	2.1	2.6	3.2	3.7	5.3	7.9

**StarCool 151** 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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