

# CIMCOOL<sup>®</sup>

## METALWORKING FLUIDS

### CIMSTAR<sup>®</sup> S2

SEMISYNTHETIC, METALWORKING FLUID CONCENTRATE

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| <b>APPLICATIONS</b>            | <p><b>CIMSTAR<sup>®</sup> S2</b> is a translucent, water soluble, semisynthetic metalworking fluid.</p> <p><b>Metals:</b> Cast Iron, Nodular Iron, Carbon Steels, Alloy Steels, Aluminum, Copper, Brass, Bronze</p> <p><b>Duty Range:</b> For light to moderate-duty operations</p>  |
| <b>FEATURES &amp; BENEFITS</b> | <p><b>CIMSTAR<sup>®</sup> S2</b> is a low-cost, general-purpose machining and grinding fluid, which can be used on a variety of materials and operations.</p> <p><b>EXCEPTIONALLY MILD</b> - A good choice for individual machine applications where mixes tend to become more concentrated than recommended.</p> <p><b>EXCELLENT CLEANLINESS</b> - Provides clean parts and keeps machines clean - Good residue characteristics - residue is easily removed with an alkaline cleaner or just warm water</p> <p><b>LOW OIL EMULSIFICATION</b> - Low Oil Emulsification - Extraneous oil can be skimmed from the mix, thus preserving performance characteristics and prolonging fluid life</p> <p><b>EXCELLENT FOAM CONTROL</b> - low foaming, even in soft water (less than 125 ppm total hardness)</p> <p><b>GOOD RANCIDITY CONTROL</b> - Inhibits the growth of bacteria and mold; helps to eliminate "Monday morning odor"</p> <p><b>ENVIRONMENTALLY-FRIENDLY</b> - Good sump life and operator acceptance - Is easy to maintain and control - It is waste treatable using standard fluid treatment procedures and systems - Can also be recycled for reuse using appropriate metalworking fluid recycling equipment</p> |

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| <p><b>RECOMMENDED STARTING DILUTIONS</b></p>  | <p><b>FOR INDUSTRIAL USE ONLY</b><br/> <b>Use between 5.0% (1:20) and 10.0% (1:10) for machining and grinding ferrous and nonferrous metals.</b></p> <p><b>CIMSTAR® S2</b> is to be mixed with water for use (add concentrate to water).</p> <p>Add no other substances to the concentrate or mix unless approved by CIMCOOL® Technical Services. Not recommended for use with magnesium or alloyed magnesium.</p> <p><b>For concentration analysis, use</b> the MI Titration Procedure, Non-Solvent Titration Procedure, Total Alkalinity Titration Procedure, CIMCHEK™ Test Strip, or Refractometer.</p>  |
| <p><b>TYPICAL PHYSICAL AND CHEMICAL PROPERTIES</b></p>  | <p><b>Physical state:</b> Liquid<br/> <b>Appearance and odor:</b> Clear, chemical<br/> <b>Colors available:</b> Undyed<br/> <b>Solubility in water:</b> 100% Miscible<br/> <b>Weight, lb/gal, 60°F (15.6°C):</b> 8.58<br/> <b>Specific gravity, (H<sub>2</sub>O = 1):</b> 1.029<br/> <b>Boiling point, °F (°C):</b> 212 (100)<br/> <b>Flash point, COC, °F (°C):</b> None, self extinguishing<br/> <b>Fire point, COC, °F (°C):</b> NA<br/> <b>Extinguishing media:</b> NA<br/> <b>Unusual fire &amp; explosion hazards:</b> None<br/> <b>Freezing point (or pour point), °F, (°C):</b> 30 (-1)<br/> Protect from Freezing.<br/> <b>pH, concentrate:</b> 9.6<br/> <b>pH, 5.0% mix, typical operating conditions:</b> 9.0<br/> <b>Total chlorine/chloride, wt%, calculated:</b> 0.00/&lt; 50 ppm<br/> <b>Total sulfur, wt%, calculated:</b> 0.22<br/> <b>Silicones:</b> None</p> |
| <p><b>PACKAGING</b></p>   | <p><b>Available in 5-gallon pails, 55-gallon drums, and bulk containers.</b></p>  |
| <p><b>REFRACTOMETER FACTOR = 3.8</b> Multiply the scale reading obtained on your CIMCOOL® Metalworking Fluid or other acceptable refractometer by the <b>Refractometer Factor</b> to obtain the mix concentration in percent.</p> <p><b>NOTE: Calibrate the refractometer so that it reads 0.0 with water, before testing the sample mix. Remove gross contaminants from the sample mix, before testing.</b></p>            |   |
| <p>For additional information concerning CIMSTAR® S2, refer to its OSHA MSDS or contact CIMCOOL® Technical Services at 1-513-458-8199.</p> <p>Minor formulation changes or normal variations in the manufacture of this product may cause slight variances in the data presented on this sheet.<br/> Consumable Products Division/ Milacron Marketing Company<br/> Cincinnati, Ohio 45209</p> <p><b>PC-833 12/14/06</b></p> |   |