

# CIMCOOL®

## METALWORKING FLUIDS

### CIMSTAR® 60 XL

#### SEMISYNTHETIC, METALWORKING FLUID CONCENTRATE

<b>APPLICATIONS</b>	<p><b>CIMSTAR® 60 XL</b> is recommended for general-purpose machining and grinding of ferrous and non-ferrous metals. It is recommended for turning, reaming, drilling, tapping, milling, as well as internal grinding, centerless and center-type grinding, etc.</p> <p><b>Metals:</b> Cast Iron, Nodular Iron, Malleable Iron, Gray Iron, Carbon Steels, Cast Steel, High Speed Steel, High Alloy Steels, Stainless Steels and most Aluminum alloys</p> <p><b>Duty Range:</b> For moderate to heavy-duty operations</p>
<b>FEATURES &amp; BENEFITS</b>	<p><b>CIMSTAR® 60 XL</b> contains a chlorinated EP lubricant for heavy-duty operations providing the performance capabilities of soluble oils.</p> <p><b>FOAM CONTROL</b> - Designed to be low foaming in soft water (less than 125 ppm total hardness)</p> <p><b>LUBRICITY</b> - Physical and chemical lubricants provide good machining and grinding properties - Keeps parts and tools cool</p> <p><b>EXCELLENT RANCIDITY CONTROL</b> - Contains a patented biostable microbial control package - Effective protection against bacteria and mold - Provides long life and minimizes the use of additives</p> <p><b>EXCELLENT FERROUS CORROSION CONTROL</b> - Rust inhibitor package is extremely effective in preventing in-process rust on machines and parts - Also very effective on cast/malleable/gray/ and nodular iron</p> <p><b>NON-FERROUS CORROSION CONTROL</b> - Contains non-ferrous corrosion inhibitors</p> <p><b>GENERAL-PURPOSE PRODUCT</b> - Can be used economically throughout the shop on moderate to heavy-duty operations.</p> <p><b>OPERATOR FRIENDLY</b> - Easy to maintain and control - Waste treatable using standard fluid treatment procedures and systems - Can be recycled for reuse</p> <p><b>Note:</b> CIMSTAR® 60 XLB has the same performance characteristics as CIMSTAR® 60 XL but in addition, is designed to be low foaming in soft water (50 ppm hardness)</p>

<p><b>RECOMMENDED STARTING DILUTIONS</b></p>	<p><b>FOR INDUSTRIAL USE ONLY</b>  <b>Recommended Starting Dilution: 5% (1:20)</b>  <b>Typical Operating Range: 5% (1:20) to 10% (1:10)</b>  <b>For concentrations outside this range contact CIMCOOL® Technical Service at 513-458-8199.</b></p> <p><b>CIMSTAR® 60 XL</b> is to be mixed with water for use (add concentrate to water). Add no other substances to the concentrate or mix unless approved by CIMCOOL® Technical Services.</p> <p>Not recommended for use with magnesium or alloyed magnesium.</p> <p><b>For concentration analysis, use the MI Titration Procedure, Non-Solvent Titration Procedure, Total Alkalinity Titration Procedure, CIMCHEK™ Test Strip, or Refractometer.</b></p>
<p><b>TYPICAL PHYSICAL AND CHEMICAL PROPERTIES</b></p>	<p><b>Physical state:</b> Liquid  <b>Appearance and odor:</b> Clear / Chemical  <b>Colors available:</b> Undyed, Pink, Blue  <b>Solubility in water:</b> 100% Miscible  <b>Weight, lb/gal, 60°F (15.6°C):</b> 8.68  <b>Specific gravity, (H<sub>2</sub>O = 1):</b> 1.04  <b>Boiling point, °F (°C):</b> 212 (100)  <b>Flash point, COC, °F (°C):</b> None, Self Extinguishing  <b>Fire point, COC, °F (°C):</b> NA  <b>Freezing point (or pour point), °F, (°C):</b> 26 (-3)          If frozen, product separates. Thaw completely at room temperature and stir thoroughly.  <b>pH, concentrate:</b> 9.8  <b>pH, 5.0% mix, typical operating conditions:</b> 8.8  <b>Total chlorine/chloride, wt%, calculated:</b> 3.90/&lt; 50 ppm  <b>Total sulfur, wt%, calculated:</b> 0.26  <b>Silicones:</b> No for CIMSTAR® 60 XL / Yes for CIMSTAR® 60 XLB  <b>Triazine:</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 = 1.6</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® 60 XL, refer to its OSHA MSDS or contact CIMCOOL® Technical Services at 1-513-458-8199. Reprints/Updates of this Product Information Flyer (PIF) can be found on our web site, <a href="http://www.cimcool.com">www.cimcool.com</a> or from your Milacron representative.</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.          Consumable Products Division/ Milacron Marketing Company          Cincinnati, Ohio 45209</p> <p>PC-9921 1/3/07</p>	

