

# CIMSTAR<sup>®</sup> 60C-HFP with FACT<sup>™</sup>

## Semi-Synthetic, Metalworking Fluid Concentrate for High Fluid Pressure Applications

<p><b>APPLICATIONS</b></p>	<p><b>CIMSTAR<sup>®</sup> 60C-HFP</b> is a premium semi-synthetic that contains a chlorinated EP lubricant for heavy-duty operations providing the performance capabilities of soluble oils. It is recommended for High Fluid Pressure and High Volume Flow Applications where minimization of foam is critical for part quality and machine operations. It is recommended for general-purpose machining and grinding of ferrous and non-ferrous metals. Can be used 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 Steels, High Speed Steels, High Alloy Steels, Tool Steels, Stainless Steels, and most Aluminum Alloys</p> <p><b>Duty Range:</b> For moderate to heavy-duty operations</p>										
<p><b>FEATURES &amp; BENEFITS</b></p>	<p><b>CIMCOOL<sup>®</sup> – HFP Fluids</b> <small>with FACT<sup>™</sup></small> provide superior foam control through the combination of product design, raw material selection and innovative antifoam technology. These fluids are the result of years of experience that have identified creative methods to prevent, control and reduce foam, even when fluids are used in high pressure delivery systems. This expertise is only available in <b>CIMCOOL<sup>®</sup> – HFP Fluids</b> <small>with FACT<sup>™</sup></small>.</p> <div data-bbox="690 976 1193 1365" data-label="Figure"> <p><b>High Pressure Foam Test</b> 600 psi @ 5% in 50 ppm water <b>CIMSTAR 60C – HFP</b></p> <table border="1"> <thead> <tr> <th>Competitor</th> <th>Maximum Foam Generated (%)</th> </tr> </thead> <tbody> <tr> <td>Competitor A</td> <td>~85%</td> </tr> <tr> <td>Competitor B</td> <td>~110%</td> </tr> <tr> <td>Competitor C</td> <td>~85%</td> </tr> <tr> <td>CIMSTAR 60C – HFP</td> <td>~35%</td> </tr> </tbody> </table> </div> <p><b>LUBRICITY</b> – A combination of lubricants provide good machining and grinding properties- Keeps parts and tools cool</p> <p><b>EXCELLENT RANCIDITY CONTROL</b> – Contains a patented microbial control package for biostable performance</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>OPERATOR FRIENDLY</b> – Mild to skin – Easy to mix – Pleasant odor</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>	Competitor	Maximum Foam Generated (%)	Competitor A	~85%	Competitor B	~110%	Competitor C	~85%	CIMSTAR 60C – HFP	~35%
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## Semi-Synthetic, Metalworking Fluid Concentrate

<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<sup>®</sup> Technical Service at 513-458-8199.</b></p> <p><b>CIMSTAR<sup>®</sup> 60C-HFP</b> is to be mixed with water for use (add concentrate to water).</p> <p>Add no other substances to the concentrate mix unless approved by CIMCOOL<sup>®</sup> 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<sup>™</sup> Test Strip, or Refractometer.</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  <b>Solubility in water:</b> 100% Miscible  <b>Weight, lb/gal, 60° F (15.6° C):</b> 8.7  <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, °F (°C):</b> 26 (-3)          Protect from freezing.  <b>pH, concentrate:</b> 9.7  <b>pH, 5.0% mix, typical operating conditions:</b> 9.1  <b>Total chlorine/chloride, wt%, calculated:</b> 3.2/&lt; 50ppm  <b>Total sulfur, wt%, calculated:</b> 0.26  <b>Triazine:</b> None  <b>Dicyclohexylamine:</b> None</p>
<p><b>PACKAGING</b></p>	<p>Available in 5-gallon pails, 55-gallon drums, and bulk containers.</p>
<p><b>REFRACTOMETER FACTOR = 1.6</b> Multiply the scale reading obtained on your CIMCOOL<sup>®</sup> 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<sup>®</sup> 60C-HFP, refer to its OSHA MSDS or contact CIMCOOL<sup>®</sup> 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 variations in the data presented on this sheet.          Consumable Products Division/Milacron Marketing Company          Cincinnati, Ohio 45209</p> <p>ISO Certified Company          9001/14001</p> <p>PC-HFP-102</p> 	