

CIMCOOL®

METALWORKING FLUIDS

CIMSTAR® QUAL STAR® LF SEMISYNTHETIC, METALWORKING FLUID CONCENTRATE

APPLICATIONS	<p>CIMSTAR® QUAL STAR® LF is recommended for general-purpose machining and grinding of ferrous metals.</p> <p>Metals: Cast Iron, Nodular Iron, Carbon Steels, High Speed Steel, High Alloy Steels, Stainless Steels, Aluminum</p> <p>Duty Range: For moderate to heavy-duty operations</p>
FEATURES & BENEFITS	<p>CIMSTAR® QUAL STAR® LF is a new-generation semi synthetic metalworking fluid. It blends the technological advantages of modern day synthetic fluids with the performance capabilities of soluble oils. Designed to be low foaming in soft water (less than 125-ppm total hardness).</p> <p>LUBRICITY - Physical and chemical lubricants provide good machining and grinding properties - Keeps parts and tools cool</p> <p>EXCEPTIONALLY MILD - Ideal for individual machine applications - Can be used in central system applications</p> <p>EXCELLENT FERROUS CORROSION CONTROL - Rust inhibitor package is extremely effective in preventing in-process rust on machines and parts - Effective on cast/malleable/gray/nodular irons</p> <p>NON-FERROUS CORROSION CONTROL - Contains non-ferrous corrosion inhibitors which prevent stain on aluminum alloys, brass, copper and bronze</p> <p>SUPERIOR RANCIDITY CONTROL - Effective protection against bacteria and mold</p> <p>GENERAL-PURPOSE PRODUCT - Can be used economically throughout the shop on light, moderate and some heavy-duty operations; just vary the dilution to suit the job requirements</p> <p>MACHINE FRIENDLY - Liquid residue keeps machine tool components free moving</p> <p>ENVIRONMENTALLY FRIENDLY - Can be recycled for reuse</p>

<p>RECOMMENDED STARTING DILUTIONS</p>	<p>FOR INDUSTRIAL USE ONLY Use between 5.0% (1:20) and 10.0% (1:10) for machining and grinding ferrous and nonferrous metals.</p> <p>CIMSTAR[®] QUAL STAR[®] LF 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>For concentration analysis, use the MI Titration Procedure, Non-Solvent Titration Procedure, Total Alkalinity Titration Procedure, CIMCHEK[™] Test Strip, or Refractometer.</p>
<p>TYPICAL PHYSICAL AND CHEMICAL PROPERTIES</p>	<p>Physical state: Liquid Appearance and odor: Slightly hazy, chemical Colors available: Undyed, pink Solubility in water: 100% Miscible Weight, lb/gal, 60°F (15.6°C): 8.46 Specific gravity, (H₂O = 1): 1.014 Boiling point, °F (°C): 212 (100) Flash point, COC, °F (°C): None, self extinguishing Fire point, COC, °F (°C): NA Extinguishing media: NA Unusual fire & explosion hazards: None Freezing point (or pour point), °F, (°C): 30 (-1) If frozen, thoroughly thaw prior to using. pH, concentrate: 9.7 pH, 5.0% mix, typical operating conditions: 8.9 Total chlorine / chloride, wt%, calculated: 0.00 / < 50 ppm Total sulfur, wt%, calculated: 0.16 Silicones: None</p>
<p>PACKAGING</p>	<p>Available in 5-gallon pails, 55-gallon drums, and bulk containers.</p>
<p>REFRACTOMETER FACTOR = 1.6 Multiply the scale reading obtained on your CIMCOOL[®] Metalworking Fluid or other acceptable refractometer by the Refractometer Factor to obtain the mix concentration in percent.</p> <p>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.</p>	
<p>For additional information concerning CIMSTAR[®] QUAL STAR[®] LF, refer to its OSHA MSDS or contact CIMCOOL[®] Technical Services at 1-513-458-8199.</p> <p><small>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</small></p> <p>Date 12/5/00</p>	