



# OAK KOOL<sup>®</sup> 657

## SYNTHETIC METALWORKING FLUID CONCENTRATE

<b>APPLICATIONS</b>	<p><b>OAK KOOL 657</b> metalworking fluid is recommended for machining and grinding operations, including creep feed grinding, on non-ferrous or ferrous metals.</p> <p><b>Metals:</b> Wrought aluminum alloys (2024, 6061, 7050, 7075), Cast aluminum alloys (380, 390), Cast Iron, Nodular Iron, Carbon Steels, Stainless Steels, Titanium, Other Exotic Alloys, Copper Alloys, and Bronze Alloys.</p> <p><b>Duty Range:</b> For moderate to heavy-duty operations.</p>
<b>COMPETITIVE ADVANTAGES</b>	<p><b>OAK KOOL 657</b> metalworking fluid is a unique, low pH synthetic fluid designed for aerospace alloys.</p> <p><b>EXCELLENT LUBRICITY</b> - Provides excellent tool life and surface finish</p> <p><b>EXCELLENT CLEANLINESS</b> - Rejects tramp oil to keep product clean, which extends sump life</p> <p><b>OPERATOR - FRIENDLY</b> - Provides excellent part visibility - A fresh mix is transparent - No Smoke - Low misting - Mild to the skin</p> <p><b>EXCELLENT MACHINE COMPATIBILITY</b> - Very low foaming product, even when used with deionized water</p> <p><b>EXCELLENT RANCIDITY CONTROL</b> - Excellent fluid life – Minimizes the need for additives</p> <p><b>ENVIRONMENTALLY FRIENDLY</b> - Easily recycled</p>

<p><b>GETTING STARTED</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 Technical Service at 513-458-8199.</b></p> <p><b>OAK KOOL 657</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 Technical Services.</p> <p>Not recommended for use with magnesium or alloyed magnesium.</p> <p><b>For concentration analysis</b> use a refractometer, Alkalinity Titration, or BCG Titration Procedure.</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> 9.0  <b>Specific gravity, (H<sub>2</sub>O = 1):</b> 1.08  <b>Boiling point, °F (°C):</b> 212 (100)  <b>Flash point, COC, °F (°C):</b> None, Self Extinguishing  <b>Freezing point, °F, (°C):</b> 13 (-11)          If frozen, product separates. Thaw completely at room temperature and stir thoroughly.  <b>pH, concentrate:</b> 8.2  <b>pH, 5.0% mix, typical operating conditions:</b> 7.8  <b>Total chlorine/chloride, wt%, calculated:</b> 0.00/0.09  <b>Total sulfur, wt%, calculated:</b> 0.00  <b>Silicones:</b> None  <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 = 1.7</b> Multiply the scale reading obtained on most refractometers 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 <b>OAK KOOL 657</b>, refer to its OSHA MSDS or contact Technical Services at 1-513-458-8199.</p> <p><b>WARRANTY:</b> Oak International, Inc. will grant credit on any product which proves defective in material or workmanship as determined by us subject to the following conditions: all material is subject to our inspection prior to issuing credit; any refund will be adjusted based on the volume of product used; no credit will be granted for used or unused product(s) over one year old as determined by the batch number. The terms in this warranty do not in any way extend to any product thereof covered by this agreement, which has a life, under normal usage, inherently shorter than the one year period indicated above. Except as set forth expressly in writing herein, there are no other warranties express or implied in respect of any product. No warranty of merchantability or fitness for purpose shall apply.</p> <p><b>LIMITATION OF LIABILITY:</b> Under no circumstances shall we or any affiliate of ours have any liability whatsoever for loss of use or for any indirect or consequential damages.</p> <p><b>Minor formulation changes or normal variations in the manufacture of this product may cause slight variances in the data presented on this sheet. 5/1/08 REV</b></p>	