



**OAK INTERNATIONAL**  
Global Metalforming Fluids

## **OAK DRAW<sup>®</sup> 829-A**

**SOLUBLE OIL STAMPING AND DRAWING FLUID CONCENTRATE**

<b>APPLICATIONS</b>	<p><b>OAK DRAW 829-A</b> is a versatile, heavy-duty stamping and drawing fluid designed for stamping, drawing, blanking, bending, forming, punching, piercing and end-forming operations.</p> <p><b>Metals:</b> Ferrous alloys, and most non-ferrous alloys including aluminum, copper and stainless steel.</p> <p><b>Duty Range:</b> For heavy-duty operations.</p>
<b>COMPETITIVE ADVANTAGES</b>	<p><b>EXCELLENT CORROSION CONTROL ON FERROUS METALS</b></p> <p><b>NON-FOAMING TO ALLOW USAGE IN RE-CIRCULATING SYSTEMS</b></p> <p><b>SUPERIOR DIE AND TOOL LIFE</b></p> <p><b>WASHES OFF PARTS EASILY</b></p> <p><b>GOOD SUMP LIFE</b> – good microbial inhibition to prevent rancidity and extend sump life</p> <p><b>GOOD HARD WATER STABILITY</b> – to 450 PPM (26 grains)</p> <p><b>EASILY CLEANABLE WITH AQUEOUS OAK CLEANERS AND MOST SOLVENT (CONCENTRATE) SYSTEMS</b></p>

<p><b>GETTING STARTED</b></p>	<p><b>FOR INDUSTRIAL USE ONLY</b></p> <p><b>OAK DRAW 829-A</b> is usually mixed with water for use (add concentrate to water), but may be used undiluted for very heavy duty forming. Use between 5.0% (1:20) and 50.0% (1:1) for most forming of ferrous and nonferrous metals.</p> <p>Add no other substances to the concentrate or mix unless approved by your OAK Representative. Not recommended for use with magnesium or alloyed magnesium.</p>
<p><b>TYPICAL PHYSICAL AND CHEMICAL PROPERTIES</b></p>	<p><b>Physical state:</b> Liquid  <b>Appearance and odor:</b> Clear, bland  <b>Color available:</b> Dark amber  <b>Solubility in water:</b> 100% miscible, white emulsion  <b>Weight, lb/gal, 60°F (15.6°C):</b> 9.2  <b>Specific gravity, (H<sub>2</sub>O = 1):</b> 1.1  <b>Viscosity, SUS at 100°F:</b> 820  <b>Flash point, COC, °F (°C):</b> 450 (232.2)  <b>Extinguishing media:</b> CO<sub>2</sub>, foam, dry chemical  <b>Unusual fire &amp; explosion hazards:</b> None  <b>Freezing point (or pour point), °F, (°C):</b> Not determined. If frozen, product separates; thaw at room temperature and stir thoroughly.  <b>pH, concentrate:</b> NA  <b>pH, 5.0% mix, typical operating conditions:</b> 9.4  <b>Total chlorine, wt%, calculated:</b> 25  <b>Total sulfur, wt%, calculated:</b> Negligible  <b>Silicones:</b> Yes</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 = 1.0</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 DRAW 829-A</b>, refer to its OSHA MSDS or contact OAK INTERNATIONAL at 1-269-651-9790.</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. 12/11/07 REV</b></p>	