

CommCool™ Max

Non-Chlorinated Semi-Synthetic Metalworking Fluids



WHAT IT DOES:

CommCool™ semi-synthetic metalworking fluids have been specifically formulated to provide you with superior products for your varied metalworking needs. The **CommCool™** series offers the broadest range of performance features in a single product family as well as providing maximum health, safety and environmental benefits. This product series has excellent bio-resistance, emulsion stability, and rust and corrosion prevention characteristics. The unique formulation provides superior cooling which promotes increased tool life and improved surface finishes. **CommCool™ Max** was specifically formulated to work in both hard and soft water.

CommCool™ Max is compounded for medium to heavy duty machining applications. **CommCool™ Max** has additional lubricity and performance additives that make it the ideal choice when machining a variety of dissimilar metals, or when machining tough metals like aluminum, stainless, carbide, and super alloys. **CommCool™ Max** has excellent foam fighting characteristics. This is especially evident when used in high pressure, high volume, and through-the-tool fluid delivery systems. **CommCool™ Max** is the dependable choice for your demanding applications and economical restrictions.

WHERE TO USE IT:

CommCool™ Max is compounded for use in medium to heavy duty machining applications and is most effective when used under the following conditions:

PROPER MIXING AND CARE OF COOLANTS

- Always add concentrate to water with a small amount of agitation
- Protect product from freezing
- If product has frozen, allow it to thaw naturally and completely to room temperature. The product should be checked for consistency. If necessary, product can be re-mixed with slight agitation
- Store coolant containers indoors. If coolant drums must be stored outdoors, place them on their sides to minimize the potential for water to enter drums
- Never expose coolants to temperature extremes
- Do not add any compounds to this coolant unless recommended by Commonwealth Oil

PERFORMANCE BENEFITS:

CommCool™ Max has been specifically formulated to deliver the following benefits:

- Excellent bio-resistance, emulsion stability, and rust and corrosion prevention characteristics
- Superior cooling which promotes increased tool life and improved surface finishes
- Excellent foam fighting characteristics
- Maximum health, safety and environmental benefits
- Works in both hard and soft water



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TECHNICALLY SPEAKING:

Test	CommCool™ Max
pH Concentrated	10.2
pH 5% Solution	9.3
Cast Iron Chip Test - ASTM#D-4627 (Modified)	Pass
Refractive Index (RI) Factor	Multiply RI by 2.08 for Concentration %
RI for a 5% Solution	2.40
RI for a 10% Solution	4.80
Flash Point, COC	None
Density, lbs./US Gallon	8.35
Specific Gravity	1.0

These are typical figures and do not constitute a specification.

THE EFFECTS OF WATER QUALITY ON EMULSION STABILITY

To obtain the best performance from this or any water miscible metalworking fluid, begin with quality water. Water hardness in parts per million (PPM) of calcium and magnesium varies by region. To determine your plant's water hardness, telephone your regional Water Treatment Plant or send a 4 ounce sample to our laboratory, and we will determine the water hardness for you. Water hardness may also be reported in grains of hardness. To convert to parts per million, multiply by 17.5 (1 grain = 17.5 PPM). The best emulsion stability and wetting ability are obtained with reverse osmosis, distilled or de-ionized water or a blend of them. The ideal water hardness range is greater than 25 PPM but less than 125 PPM. Exceptionally hard water (above 200 PPM) can have a de-stabilizing effect on this coolant, and can often prematurely deplete rust inhibitor, metal passivating, and other performance additives. To ensure optimum performance of the coolant, mix according to the following minimum concentrations.

SUGGESTED MINIMUM MIXING CONCENTRATIONS FOR WATER HARDNESS			
	0 – 50 PPM	50 – 100 PPM	100 – 200 PPM
CommCool™ MAX	4% (25:1)	4% (25:1)	5% (20:1)

For water hardness conditions exceeding 200 PPM, concentration adjustments above 5% may be required.

Handling & Safety Information

For information on the safe handling and use of this product, refer to the Material Safety Data Sheet obtainable from Commonwealth Oil Corporation.



Available in Pails, Drums and One-Way Bulk Containers

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