

COMMCOOL™ PLUS NON-CHLORINATED SEMI-SYNTHETIC METALWORKING FLUIDS

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. 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. The **Commcool™** products were specifically formulated to work in soft water. The **Commcool™** family of semi-synthetic metalworking fluids, like all Commonwealth products, was formulated to provide maximum health, safety and environmental benefits.

Commcool™ PLUS: is the ultimate semi-synthetic metalworking fluid and is compounded for the toughest of all machining applications. **Commcool™PLUS** has additional lubricity and performance additives that make it the ideal choice when machining a variety of dissimilar metals, or when machining tough to machine metals like aluminum, stainless, carbide, and super alloys. **Commcool™PLUS** has the best foam fighting characteristics of this products series. This especially evident when used in high pressure, high volume, and through-the-tool fluid delivery systems. **Commcool™PLUS** is the dependable choice for your most exacting and demanding applications. **Commcool™PLUS** as the added benefit an exceptional rust preventative and has often been specified by leading Big Three auto maker for many of their contacts.

Commcool HD Semi-Synthetic Coolant

Features:

- Light to Heavy Duty Machining Coolant
- Can be used with water up to 250 ppm hardness
- Performs very well in high speed machining operations
- Non-chlorinated
- Exceptionally stable coolant

Advantages:

- Resistant to bacteria and fungus growth
- Low foaming even under high pressure
- Great rust protection
- Ferrous chips will not form clinkers
- Good tramp oil separation

Benefits:

- Competitively priced
- Very low odor friendly
- Great coolant for multi-purpose machining operations



Commonwealth
EXPERIENCE THE TECHNOLOGY Oil

TECHNICALLY SPEAKING:

Specific Gravity	1.00
Density lbs. /U.S. gallon	8.32
Flash Point	No Flash Point
PH(Conc.)	10.0
PH(5% solution)	9.3
Cast Iron Chip Test-ASTM#D-4627(Modified)	Pass
Reactive Index (RI) Factor	Multiply RI by 1.6 for concentration %
RI For 5% Emulsion	3.00
RI For 10% Emulsion	6.00

These are typical figures and do not constitute a specification.

The effects of water quality on emulsion stability

To obtain the best performance for this or any water miscible metal working 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. Water hardness may also be report in grains of the 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 reserve 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 220 ppm) can have a de-stabilizing effect on this coolant, and can often prematurely deplete rust inhibitor, metal passivating, and other performances additives.

To ensure optimum performance of the coolant, mix according to the following minimum concentrations.

SUGGETED MINIMUM MIXING CONCENTRATIONS FOR WATER HARDNESS			
	0-50 ppm	50-100 ppm	100-200 ppm
Commcool™ HD:	3%(33:1)	3.5%(28:1)	4%(25:1)

Proper mixing and care of the coolants

- Always add concentrate to water with a small amount of agitation
- Protect product from freezing
- If a 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 coolants 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 other compound to this or any other coolant unless recommended by the manufacturer.