

# Opticool™ 462(E)

## Description

OPTICOOL 462(E) is a unique blend of high performance additives and superior oil-based lubrication. OPTICOOL 462(E) offers cost effective dilutions, corrosion inhibition, extreme pressure resistance and hard water stability. The utilization of synthetic chemistry reduces the possibility of smoking or misting that occur with conventional emulsified oils and increase the lubricity at the tool/work piece interface.

## Composition

OPTICOOL 462(E) is compounded with the most effective extreme pressure and anti-weld additives. These additives along the base lubricant provide both hydrodynamic (barrier film) and boundary lubrication which effectively extend tool life and improve surface finish. A biological preservation package provides microbial control virtually eliminating any adverse effects on the skin.

OPTICOOL 462(E) does not contain nitrites, phenols, sulfur, mercurials or chlorinated additives.

## Properties

- Stable emulsion for long lasting use
- Optimum blend of Petroleum and Synthetic technology
- Extreme pressure capability
- Minimizes rancidity and odors
- Lowers disposal and downtime costs
- Corrosion protection

## Suggested Uses

- Broaching
- Milling
- Deep Drilling
- Turning
- Reaming
- Grinding
- Sawing
- Stamping
- Tapping
- Drawing
- Fine Threading

## Directions

OPTICOOL 462(E) should be added to water at the recommended starting point. It is important that the coolant be added to water. Do not add water to the coolant.

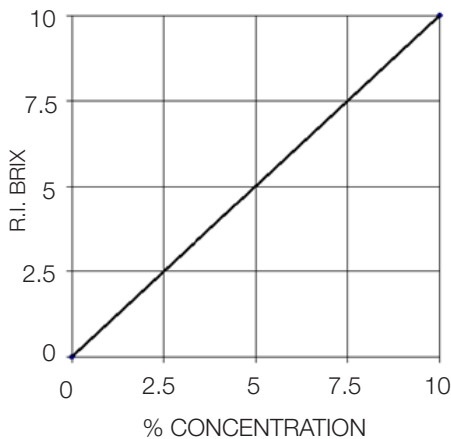
Before adding OPTICOOL 462(E) to any reservoir, remove old coolant, fines and residues from the system. Drain the old coolant from the sump; charge the system with Chesterton 218 HDP Cleaner at 5% concentration. Circulate the cleaner for up to 2 hours through all lines, tool holders and work pieces.

Dilutions in excess of 40:1 are not recommended since the corrosion protection and resistance to bacterial attack will be reduced

## Typical Physical Properties

	<b>OPTICOOL 462(E)</b>
Form	Liquid Concentrate
Appearance 5% Water	Transparent, Milky
Solubility in Water	Complete
Flash Point	>160°C (320°F)
Freeze Thaw Stability	Pass
pH Concentrate	N/A
pH 5% Concentration	9.1
Base Fluid	Oil Blend
Specific Gravity	1.03

### Concentration Check



### Recommended Starting Dilutions

	Alloy Steels	Carbon Steel	Aluminum
Boring	10%	5%	5%
Drilling	10%	5%	5%
Milling	10%	5%	5%
Reaming	10%	5%	5%
Tapping	10%	5%	5%
Turning	5%	5%	5%
Stamping	10%	10%	10%
Drawing	10%	10%	10%

### Coolant Maintenance

Concentration of the fluid changes constantly during use due to evaporation and “drag out” on chips. Volume loss to evaporation is 100% water. For maximum performance, the concentration should be monitored and maintained on a regular basis. The Brix chart above gives the approximate relationship between coolant concentration and refractometer reading.

Often it is helpful to monitor the sump’s pH. If the pH is or drops, below 8.5 the sump is imbalanced and requires conditioning. Adding fresh coolant or Opticool Additives helps maximize coolant life.

### Clean Up

Residual Coolant on parts, equipment and machine tools is easily removed by rinsing with water.

### Safety

Before using this product, review the Material Safety Data Sheet (MSDS) or the appropriate safety sheet in your area.

### Waste Disposal

If permitted by local or state regulation, the product may be discharged into a waste disposal system, but only after the water insoluble fraction removed with acid-alum or alum-polymeric demulsifiers.

If reclamation is not possible, check with local authorities on proper procedures for disposal.

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