



## FS 378 LF

FS 378 LF is a heavy-duty, high-oil semi-synthetic (*microemulsion*) that is exceptionally low foaming. It is formulated to fit the all-purpose needs of both large and small plant operations and may be used in hard- or soft-water applications (however, soft [DI or RO] water is the best). FS 378 LF contains unique extreme pressure additives that provide excellent lubricity, form clean and stable emulsions, and keep the machine and tool surfaces residue free. FS 378 LF also has exceptional rust-inhibiting qualities and is highly resistant to bacterial growth.

FS 378 LF has successfully replaced several competitive soluble oils containing up to 10% chlorine in the formulation. This product is strongly recommended for anyone wishing to increase production, tool life, and reduce waste.

### Product Application:

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FS 378 LF is an extremely versatile product and at varied concentrations achieves superior results in a great variety of cutting, drilling, tapping, reaming, broaching, and grinding operations.

### Typical Specifications and Performance Data:

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Fluid Type	Microemulsion
Appearance of Emulsion	Translucent Blue
Specific Gravity @ 25°C	1.0
pH 5% in Deionized Water	9.0 - 9.6
Flash Point COC	NA
Weight per Gallon	8.34 lbs.
Freeze-Thaw Cycle	Stable
Rust Protection	Excellent
Metal Staining	NA, safe on ferrous and non-ferrous metals
Chlorine	7% - 15%
Sulfur	0.0%
Foam	Exceptionally low in DI, RO, and hard water



## **Recommended Refractive Readings:**

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Grinding: 3.0–5.0; dilution ratio 10:1 = 4.75

Drilling/Tapping: 5.0–10.0 ; dilution ratio 20:1 = 3.25

Machining: 5.0–10.0 ; dilution ratio 30:1 = 1.95

Best results are achieved when the coolant is kept above a refractive index of 4.0. Above this level the microbes are less capable of multiplying, thus preventing rancidity, rust problems, and poor tool life.

## **Storage and Handling:**

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The coolant concentrate should be stored at temperatures above 15°F. In case the temperature might be lower at any time, the coolant concentrate needs to be well mixed before diluting.

## **Health and Safety:**

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FS 378 LF is free of diethanolamines (DEA), diethanolamides, and sulfur. Refer to Material Safety Data Sheet for safe handling procedures.

## **Product Availability:**

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- 5-gal. Pails
- 55-gal. Drums
- 265-gal. Mini-bulk