

TECHNICAL DATA SHEET

CAL-COOL ES 380

Advanced Technology Machining Fluid For Ferrous Applications.

DESCRIPTION

CAL-COOL ES 380 is an advanced technology metalworking fluid free of mineral oil, chlorine, nitrite, phenol, sulphur and hazardous chemicals. The combination of special lubricants makes the product outstanding for general machining of ferrous materials. **CAL-COOL ES 380** is having superior corrosion protection and the combination of additives and surfactants makes the product outstanding for ferrous machining and keeps the machines and parts clean.

APPLICATION

CAL-COOL ES 380 offers improved performance in applications where conventional high oil content soluble coolants are often used, providing enhanced machining performance, better cleanliness, and long life. **CAL-COOL ES 380** can be used for general machining operations on ferrous materials.

CAL-COOL ES 380 can be used in soft and hard waters [50-400 ppm] and suitable for centralized as well as individual systems with proper monitoring.

SPECIAL FEATURES

- Mineral oil, Chlorine, phenol, nitrite, secondary amine, heavy metals free makes the product operator and environmental friendly.
- Superior lubricity when compared with conventional soluble oils, enhanced tool life
- Exceptional product stability, long coolant life
- Provides lower process costs and machine downtime
- Less drag-out as compared to conventional soluble oil, hence less consumption
- Low foaming behaviour in all water conditions, ensuring continuous machining.
- Superior rust protection even in hard water conditions.

HEALTH AND SAFETY

For proper handling and storage, please refer SDS, and share the information to user. For any other information, please contact Callington representative.

The product is available in 200 Liters-Drum and 20 Liters-Pails

TYPICAL DATA

CONCENTRATE	METHOD	UNITS	TYPICAL VALUES
Appearance	Visual	-	Clear, yellow fluid
Specific Gravity	ASTM D 4052	-	1.057
SOLUTION			
Appearance	Visual	-	Translucent to Whitish
pH in use	pH meter	-	9.0
Refractometer Factor	Refractometer	-	1.6

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RECOMMENDED DILUTIONS

Concentration varies depending on the type of machining operation, the water hardness, and required finish.

The starting concentration can be 6.00—8.00% and it can be optimized slowly by monitoring. It is recommended to map the machine shop before concentration recommendation. The survey form is available with Callington representative.

CALLINGTON PRODUCTS

Callington's SYN and **CAL-COOL ES** series are proven product for use in all metalworking applications.

Apart from above, Callington is having below product range:

CalGuard DW and DWP series of Rust Preventives suitable for protection up-to 12 months

Pro-Clean series of cleaners suitable for removing different soils from components and meet the Millipore requirement

Evap-Lube series of stamping oils

Eco-Tap Spray for drilling, tapping, cutting

COOLANT MANAGEMENT

- Always premix the coolant for top-up. Do not add coolant directly to sump
- Coolant shall be added in water in the recommended ratio and shall be mixed thoroughly before top-up
- Keep check on water quality, recommended water quality will ensure long sump life and smooth running
- Run oil skimmers to remove excess tramp oil from coolant
- Ensure chip / swarf conveyors or chips / burr removal system is in working condition, if swarf remains in sump, coolant can turn brown, or it can accelerate corrosion / rust
- Circulate coolant and check concentration with a refractometer. Maintain fluid level
- Check pH using pH colour sticks (If pH starts to fall, add coolant to bring up concentration. If pH does not stabilize, it is time to replace coolant. If coolant needs to be replaced, dump old coolant, clean machine using tank cleaning procedure)
- Record data on a machine check sheet. This can be used to determine trends of a particular machine

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