

TECHNICAL DATA SHEET

CAL-COOL ES 210

Advanced Technology Grinding & Light Machining Fluid

DESCRIPTION

CAL-COOL ES 210 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 grinding and light machining. **CAL-COOL ES 210** is having superior corrosion protection and cleanliness properties to keep machine parts protected and clean.

APPLICATION

CAL-COOL ES 210 offers improved performance in applications where conventional semi-synthetic and soluble coolants are often used, providing enhanced grinding performance, superior cleanliness, and machining performance. **CAL-COOL ES 210** can be used for grinding and general machining operations on cast iron and low to medium tensile steels, aluminium alloys and copper alloys.

CAL-COOL ES 210 can be used in soft and hard waters [50-400 ppm] and suitable for centralized as well as individual systems.

SPECIAL FEATURES

- Reduced drag-out helps in reduced consumption
- Optimised lubricity additives and detergency delivers enhanced component quality, reduced grinding wheel dressing, and improved wheel cleanliness
- Exceptional product stability, long coolant life and exceptional machine cleanliness
- Provides lower process costs and machine downtime
- Low foaming will allow to use the product in high pressure applications
- Excellent anti corrosion properties to protect machine tools and components
- Mineral oil, Chlorine, phenol, nitrite, secondary amine, heavy metals free makes the product operator and environmental friendly.

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, Bluish green fluid |
| Specific Gravity | ASTM D 4052 | - | 1.03 |
| SOLUTION | | | |
| Appearance | Visual | - | Translucent, Pale Green |
| pH in use | pH meter | - | 9.00 |
| Refractometer Factor | Refractometer | - | 1.65 |

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RECOMMENDED DILUTIONS

| Operation | Cast Iron | Alloy Steels | Aluminium Alloys | Copper Alloys |
|---------------|-----------|--------------|------------------|---------------|
| Grinding | 4.0% | 4.0% | 5.0% | 5.0% |
| Turning | 5.0% | 5.0% | 5.0% | 5.0% |
| Boring | 5.0% | 5.0% | 5.0% | 5.0% |
| Drilling | 5.0% | 5.0% | 6.0% | 6.0% |
| Milling | 5.0% | 5.0% | 6.0% | 6.0% |
| Screw Cutting | 5.0% | 5.0% | 6.0% | 6.0% |
| Sawing | 5.0% | 5.0% | 6.0% | 6.0% |
| Tapping | 6.0% | 6.0% | 6.0% | 6.0% |

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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