



## Technical Topic

# Dos and Don'ts of Handling Aqueous Cutting Fluids

### Dos

- Do add the concentrate to the water. Use freshly mixed product only.
- Do ensure sufficient and correctly positioned coolant flow on the work piece and tool without excessive pressure.
- Do monitor and record coolant condition regularly and take the necessary corrective measures in a timely manner.
- Do keep systems clean by avoiding adding contaminants, such as food, drinks, cigarettes, etc.
- Do remove tramp oil frequently.
- Do ensure that all leaks of hydraulic oil, gearbox and other machine tool lubricants are attended to immediately.
- Do keep coolant concentration at recommended level allowing for sludgeway/ hydraulic oil contamination.
- Do actively seek advice and training on coolant maintenance and control from your local ExxonMobil distributor.



### Don'ts

- Don't use water from infected sources, such as fire hose, borehole, header tank, etc.
- Don't put clean coolant into dirty machines. Use Mobilcut ESC cleaner and follow the specified cleaning procedure carefully.
- Don't leave machines full of coolant standing idle for long periods, particularly when contaminated with tramp oil.
- Don't use a metal working fluid beyond its working life.
- Don't prepare products in dirty or galvanised containers.
- Don't top up with water. Always use diluted emulsion.
- Don't allow operators to eat, drink or smoke near machine tools.



## Coolant Maintenance

### Daily and Weekly Actions

- 1 Check concentration of emulsion with a refractometer at the beginning of every day/shift.
- 2 Check pH with pH meter or pH paper.
- 3 Remove as much tramp oil as possible every week after the coolant has been static for one hour.
- 4 Always top up with weak emulsion, never with water.
- 5 Keep good records of coolant progress using monitoring charts. Make corrections as required.



## Machine Preparation

### Using Mobilcut ESC

- 1 Introduce Mobilcut ESC (emulsion system cleaner) at 2% solution into the machine. Circulate for up to 48 hours whilst continuing with normal work.
  - 2 Apply undiluted Mobilcut ESC to clean heavily contaminated areas.
  - 3 Pump out all used emulsion and washings. Remove all oily waste and swarf from the machine sump.
  - 4 If possible, repeat cleaning procedure with a fresh 2% solution of Mobilcut ESC in clean water and circulate for one to two hours.
  - 5 Clean the machine completely and flush with fresh dilute emulsion.
  - 6 Introduce diluted Mobilcut into the machine at the correct concentration.
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