

## Check list for water-soluble cooling lubricants

### General requirements

1. Save the concentrate in frost free area
2. Do not store outside
3. Protect from direct sunlight

### Requirements to the mixing-water

1. Drinking water quality (max.  $10^2$  cfu/ml)
2. Water hardness 5° dH - 30° dH for emulsions  
Water hardness 10° dH - 30° dH for solutions
3. Do not pre-heat water  
Temperature < 25 °C
4. pH-value: 6 to 9
5. Nitrate content < 50 ppm (aspire: < 25 ppm)

### Mixing of the emulsion or solution

1. Fill with water in a clean tank outside the machine
2. Add the cooling lubricant concentrate

If you use a mixer please mind that this is not constructionally changed (length of the tube etc.)

### Controlling during the application

1. Odour and visual control
2. Measure the concentration by using a handrefractometer (manufacturers data)
3. pH-value (manufacturers data)
4. Water hardness 5° dH - 30° dH for emulsions  
Water hardness 10° dH - 30° dH for solutions
5. Nitrite concentration max. 20 ppm
6. Minimise foreign oil content, skim off if necessary
7. Prevent the input of foreign oil
8. If necessary send a sample to oelheld

### Before initial filling

1. Add system cleaner (manufacturers data)
2. Continue working: Emulsions ca. 24 hours, solutions ca. 8 hours
3. Pump out the old emulsion or solution
4. If necessary flush out with clear water (several times)
5. Clean the machine
6. Initial filling

**If you have any queries? Please do not hesitate to contact us!**