

# EMULCUT 4020

emulsifiable metalworking fluid



EMULCUT 4020 is a boron and formaldehyde free, amine containing, water-miscible, semi-synthetic multi-purpose coolant. It is developed for light to medium machining operations on steel and cast iron. Due to the good flushing performance and excellent foam tendency EMULCUT 4020 is also suited for grinding operations in the bearing industry. EMULCUT 4020 is applicable in waters from approx. 10 °german hardness.

EMULCUT 4020 has a mineral content of approx. 20%. The concentrate does not contain nitrite or critical secondary amines. Therefore it corresponds to the TRGS 611 regulations. Inhibitors give effective prevention against nitrosamine formation. Due to efficient anti-corrosion additive system EMULCUT 4020 emulsions provide long-term pH stability.

We suggest to make-up the EMULCUT 4020-emulsion with an applicable blending tool. Fill in water with a hardness range from 10 to 20 °german hardness and at temperature from 20 to 30 °C then, while stirring, add slowly the concentrate. The working temperature of the emulsion should be maximum at 40 °C. We recommend testing all materials for compatibility (e.g. decolourising) before using EMULCUT 4020.

For cleaning of the machined parts we recommend a mild alkaline cleaner from our FEROCLEAN series.

The storage temperature should be between 5 to 40 °C and the concentrate has to be protected from frost. The shelf life of EMULCUT 4020 is 12 months.

### Key benefits:

- free from boron and bactericide
- free from formaldehyde
- optimized pH-stability due to modern amine composition
- very good flushing effect
- stable emulsion
- only low foam tendency

### Physical data

Appearance/20 °C	visual	clear – slightly hazy, light brown liquid	
Density/20 °C	DIN 51757	approx. 0.992	g/cm <sup>3</sup>
Viscosity/20 °C	DIN 51562/1	approx. 111	mm <sup>2</sup> /s
pH value, 5 %, DIN water, 20 °C	DIN 51369	approx. 10.3	
Corrosion protection, 3 %	DIN 51360/2	note 0	
Foam behavior, 5%, water with 20 °dH	PLM 045	immediate foam knock-down	

### Factors for concentration determination

Refractometer	1.4
Acid split method	2.5
acidimetric titration up to pH 4	0.35
acidimetric titration up to pH 7	0.43

### Concentrations recommended for use

machining operations:	5 - 10 %
grinding:	approx. 4 %

### Only valid in combination with EC Safety Data Sheet

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