



Surface Technologies

Translation of the German Technical Product
Bulletin

P3-multan® 97-10 D

Water miscible cutting fluid for general machining

Properties:

P3-multan 97-10 D is a mineral oil based general purpose coolant, suitable for a wide range of operations and water hardness (5 - 40 °GH).

Due to the selection of raw materials, P3-multan 97-10 D is resistant against bacteria growth. Emulsions made from P3-multan 97-10 D are nearly odourless.

P3-multan 97-10 D is free boron and of EP-additives based on chlorine, sulfur or phosphorus.

Application:

P3-multan 97-10 D is mainly used for the machining of aluminium, steel and cast iron. A combination of inhibitors insures not staining on aluminium alloys.

For the make-up of emulsions in exact concentrations we recommend the use of a dosing pump.

Concentration:

Drilling, Turning:	initial charge:	3-5 %
	topping up:	1-4 %
Milling, Threading:	initial charge:	4-8 %
	topping up:	2-5 %
Grinding:	initial charge:	3-4 %
	topping up:	1-3 %

Control:Refractometer:

The reading in °Brix multiplied by the product factor 1.1 gives the concentration in percent.

Titration:

100 ml of the emulsion are titrated with 0.5 N HCl using Methylred as indicator until the color change (pH = 5.5). The consumption of acid in ml multiplied by the product factor 0.29 gives the concentration in percent.

Splitting with acid (DIN 51368)

100 ml of the emulsion are heated up with conc. Hydrochloric acid. The reading in ml multiplied by the product factor 1.25 gives the concentration in percent.

Technical data:**Concentrate:**

Appearance:	yellowish liquid
Density (20°C), DIN 51757:	0.98 ± 0.02 g/cm ³
Viscosity (20°C), DIN 53211:	110 ± 10 mm ² /s
Storage:	- 10 °C to + 50 °C

Emulsion:

Appearance:	white emulsion
pH-value (3 %, DI-water), DIN 51369:	9.2 ± 0.2
Corrosion protection properties according to DIN 51360/1:	R0/S0 at 5 %
according to DIN 51360/2:	0/0 at 4 %
Emulsion stability according to DIN 51367:	100 %
with 3 to 5 g/l NaCl added:	100 %
Lubricity Reichert-Waage (5 %, 1.5 kg):	30 mm ²
(8 %, 1.5 kg):	27 mm ²

The expiry date of the product is given on the packaging labels.

This information is based on our current level of knowledge. It is given in good faith but it is not intended to guarantee any particular properties. The users must satisfy themselves that there are no circumstances requiring additional information or precautions or the verification of details given herein.

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