COOL CONCENTRATE

Coolant concentrate for spindle cooling systems

Description

COOL CONCENTRATE is a fully synthetic, water-miscible coolant concentrate. Its ingredients passivate the various materials used in a closed cooling circuit and provide protection against corrosion*. Mixed COOL-CONCENTRATE is a very efficient coolant with a specific heat of 4.1 J/g-K, which is virtually the same value as for water (4.187 J/g-K).

Advantages

- very efficient heat removal and consequently cooler spindle temperatures
- prevents electrochemical corrosion
- effective in protecting aluminium, ferrous and non-ferrous metals from corrosion*
- zinc-plated parts are not affected
- low maintenance
- compatibility with plastic materials and seals typically used in machine construction

*Uncoated components made of grey cast or ductile cast iron in the cooling circuit can corrode if wetting is insufficient

Service

The diluted COOL-CONCENTRATE mixture must be checked periodically according to the specifications of the spindle or machine tool manufacturer. Before each coolant change, we recommend a system cleaning of the cooling circuit by adding 3 % CS-CLEANER to the coolant to be replaced. Continue working for 48 hours, then empty and clean the coolant tank and refill with diluted COOL-CONCENTRATE. Generally observe the maintenance instructions of the spindle manufacturer.

Application

When preparing the mixture with COOL CONCENTRATE, use only drinking water which does not exceed the following limits:
- water hardness max. 20°dH / 35°f/ 350 ppm
- chloride max. 100 ppm
- sulphate max. 100 ppm

Prepare a mixture of 11% with COOL CONCENTRATE. Only use clean containers for preparing the mixture. Pour the mixture into the prepared cooling system immediately.
If these water values are outside the acceptable limits, the mixture must be prepared with demineralised water or MOTOREX COOL-X ready-mix must be used! Under optimum operating conditions and in compliance with the instructions for use, the COOL CONCENTRATE mixture can remain in use for up to 1 years.
An operating temperature of 20 - 25 °C protects elastomers very effectively in the long term.

Notes

If rotary or swivel tables (i.e. slowly rotating or oscillating components) are cooled from the same coolant tank as the main spindle, we recommend the use of COOL-X AW which provides a higher lubrication capacity or the addition of the lubrication additive Lube 400 to the existing COOL-CONCENTRATE mixture.

Shelf life/Storage conditions

For 24 months after production date at a temperature range between 5°C and 35°C in closed containers. The production date is to be found on the product label.

Technical data

Properties	Unit	Test according to	Values
Colour			fluorescent green
Density at 20 °C	g/ml	ASTM D4052	1.095
Viscosity at 40 °C	mm²/s	DIN 51562-1	55
Refractometer factor	% Brix		1.9*
pH value			8.0 - 8.7
Working temperature	°C		4-80
Frezzing point	°C		-25
Working concentration	%		11-15
pH value when mixed with water		DIN 51785	8.0 – 8.7

*Hand refractometer reading 5.8 => 11%

European waste code: / Water hazard class: WGK1

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