

Synthetic metalworking fluid for grinding ferrous substrates, boron- and formaldehyde-free

Product Description

ACS-3 is a synthetic grinding fluid free of boron and formaldehyde developed to provide superior performance for critical grinding applications. ACS-3 contains corrosion inhibitors to protect both the machine tool and the substrates. In addition, the inherent biostability of this product minimizes depletion due to its resistance to microbial action. ACS-3 is specifically formulated for the machining of steel and stainless steel, but is also compatible with cast iron and aluminum alloys in mixed operation.

Physical and Chemical Properties

Property	Typical Value
Form	Liquid
Colour of concentrate	Clear blue
Density at 20°C	1.09 g/cm ³
pH-value at 5%	8.8
Mineral oil share	No mineral oil contained
Chipping test at 3 %	Grade 0 (DIN 51360/2)

Application

ACS-3 can be used on all common machine tools suitable for non-mineral oil cooling lubricants. It is suitable for different materials and machining methods and can be used in both soft and hard water.

Metals	Concentration	Suitability
Steel	> 5 %	++
Alloyed steel and stainless steel	> 7 %	++
Cast iron	> 5 %	+
Aluminium / aluminium alloys	> 5%	+
Non-ferrous metal	> 5%	0
Hard metal (containing cobalt)	> 6 %	0

++ main use ++: very suitable +: suitable 0: limited suitable

Application Area	Concentration
Grinding of high alloyed and stainless steels	3.0 %
Grinding steel	4.0 %
Grinding aluminium	5.0 %
Grinding hard metal	4.0 %

Start-up

ACS-3 is used at a concentration from 3 %. Concentration depends on the type of substrate. Slowly and thoroughly mix the grinding cooling agent in tap water by stirring or using a mixer. Add the grinding solution to the thoroughly pre-cleaned machine avoiding intermediate storage of the mixed emulsion.

Safety Guidance

Before operating the process described it is important that this complete document, together with any relevant Safety Data sheets, are read and understood. For transport, storage, use and waste

treatment of chemicals in concentrated or diluted form as well as bath solutions, the appropriate local legislation must be followed. Further specific information on the products can be obtained from the relevant Safety Data Sheets. The user should also pay strict attention to information and hazard symbols shown on product labels.