



Application

Cimtech 320Z is a new type of synthetic fluid for heavy duty machining operations on a wide range of materials. It is designed primarily for demanding operations in aluminium but hard and difficult alloys have proven to be no problem either. Cimtech 320Z can be used in individual machines as well as in central systems. Cimtech 320Z can only be used with demineralised water.

Features and benefits

Cimtech 320Z is designed primarily to improve productivity in demanding machining operations on aluminium and alloys such as stainless steel, titanium, nickel and other aerospace alloys. For use with other metals and processes please consult the compatibility guide on page two, or contact your local Cimcool representative.

Cimtech 320Z is highly cost effective, due to its low make-up rates and long fluid life. Cimtech 320Z provides excellent lubrication and cooling, and does not foam when used at recommended concentration. The complete transparency of the mix enables good visibility in the cutting zone, and it has a magnificent washing action and superior cleanliness. In addition, Cimtech 320Z rejects tramp oil and is low misting. The ingredients in Cimtech 320Z provide no nourishment for bacteria ensuring exceptional long fluid life. Operators, otherwise sensitive to traditional fluids, generally appreciate the low pH (7.9), complete transparency and neutral smelling properties of Cimtech 320Z.

Cimtech 320Z does not contain sulphur, chlorine, formaldehyde, diethanolamine or boron.

Additives should only be used after consulting a Cimcool representative.

Physical and chemical properties

Density:	1,080
pH (concentrate):	8,2
pH (operating):	7,9

Recommended starting concentration

Milling, drilling, turning, reaming and grinding	5%
Wrought and cast aluminium alloys, carbon and stainless steel, titanium and exotic alloy	5%

Use of lower concentrations than recommended above may cause foaming, corrosion and/or rancidity.

Metal and water compatibility					
Type of metal	Copper and Copper alloys such as brass and bronze	Aluminium	Cast iron	Steel, carbon- & Titanium and other stainless steel 'hard' alloys	
Compatibility	Compatible only for occasional application, but beware of risk of staining of parts, residue formation in machines and/or discoloration of mix. Regular addition of Inhibitor EC can reduce, but not eliminate this risk.	Excellent with hard Al (typically wrought and cast Al). In soft Al beware of chip build up on tools in high-speed threading, tapping and deep hole drilling operations compared to oil based fluids. For use with very special grades of Al a staining test is recommended before using the product.	Compatible, but beware of increased risk of corrosion - in particular chip corrosion - compared to conventional oil based fluids. The corrosion protection can be increased by regular addition of Cimplus T4009.	Excellent	Excellent
Water compatibility	Can only be used with demineralised water. Not doing so will in time, cause lime deposits and/or corrosion. It is recommended to check and keep the chloride concentration in the mix below 150 ppm to ensure satisfactory ferrous corrosion control.				
Remarks	Being free of mineral oil Cimtech 320Z may have a tendency of leaving a more sticky residue than traditional oil based fluids, in particular on open machines. However, regular spraying with a 1% solution of Cimclean 50F followed by wiping with a cloth (prevent fluid contamination) will easily remove such residue. Beware of residue when using measuring instruments and clean moving parts frequently. Applying a thin coat of Cimguard 10 or Cimguard 20 may prevent such problems, and will not interfere with instrument measuring accuracy.				

The above are general guidelines for single use on the above metals only. For suitability on materials not mentioned, or suitability for mixed machining of various metals with the same fluid in the same machine/system, contact your local Cimcool representative.

Mix Master S: Concentration** can easily be obtained by setting the regulator to the correct number.

** The concentration may vary depending on local conditions. It is therefore always advised to check using the refractometer or TA Kit.

Concentration analysis

For concentration analysis, use one of the below given methods or an appropriate laboratory procedure available from your local stockist.

Refractometer factor:

If the refractometer is used, the resultant reading multiplied by a factor of 1.4 will only be relevant when applied to a fresh mix.

Cimcool TA kit	Use 2 ml. Mix										*: next syringe
%	1	2	3	4	5	6	7	8	9	10	
Reading	0.74	0.53	0.33	0.12	*.91	*.71	*.50	*.29	*.09	*.88	

Handling and storage

Protect from freezing, direct sun and store between 5 - 35°C.

Packaging type

5, 25,200 and 1.000 litre.

Safety Data Sheet

The Safety Data Sheet should be consulted for specific information and information on Health, Safety and Environment when handling this product.



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