

# CIMTECH<sup>®</sup> 31-35EC

Heavy-duty synthetic

MEA & TEA free metal working fluid



## Application

Cimtech 31-35EC 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 hard and difficult alloys but aluminium alloys have proven to be no problem either. Cimtech 31-35EC can be used in individual machines as well as in central systems. Cimtech 31-35EC can be used with demineralised and good quality tap water.

## Features and benefits

Cimtech 31-35EC is designed primarily to improve productivity in demanding machining operations on stainless steel, titanium, nickel and other aerospace alloys including aluminium. For use with other metals and processes please consult the compatibility guide on page two, or contact your local Cimcool representative.

Cimtech 31-35EC is highly cost effective, due to its low make-up rates and long fluid life. Cimtech 31-35EC 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 31-35EC rejects tramp oil and is low misting. The ingredients in Cimtech 31-35EC provide no nourishment for bacteria ensuring exceptional long fluid life. Operators, otherwise sensitive to traditional fluids, generally appreciate the low pH (8.3) and complete transparency of Cimtech 31-35EC.

Cimtech 31-35EC does not contain MEA, DEA, TEA, chlorine, formaldehyde releasers, boron or BIT.

Additives should only be used after consulting a Cimcool representative.

## Physical and chemical properties

Density 20°C Kg/m <sup>3</sup> :	1052
pH (concentrate):	8,6
pH (operating):	8,3

## Methods of application

CIMTECH® 31-35EC is easy to mix, normal stirring only. For automatic mixing, the use of the Cimcool® Mix Master or Cimcool Mix Master S is recommended. Typical starting water temperature conditions should be 5 - 25°C.

## Recommended starting concentration

Machining and grinding	5%
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## Metal and water compatibility

Type of metal	Copper and Copper alloys such as brass and bronze	Aluminium	Cast iron	Steel, carbon- & stainless steel	Titanium and other 'hard' alloys
<b>Compatibility</b>	Compatible 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. Mixing with demineralised water will give improved Al corrosion protection.	Compatible, but beware of increased risk of corrosion - in particular chip corrosion - compared to conventional oil based fluids.	Excellent	Excellent
<b>Water compatibility</b>	It is advised to mix only with demineralised water or good quality tap water: maximum 10°GH. Exceeding this limit may, in time, cause lime deposits and/or corrosion. It is recommended to keep the chloride concentration in the mix below 350 ppm to ensure satisfactory ferrous corrosion control.				
<b>Remarks</b>	Being free of mineral oil Cimtech 31-35EC 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 51 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 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:	1.5
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If the refractometer is used, the resultant reading multiplied by a factor of 1.5 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	0.83	0.67	0.50	0.34	0.18	0.01	*.85	*.69	*.52	*.36

## Handling and storage

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

## Packaging type

5, 25, 200, 1000 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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