Berucut XC –
The new fluid generation in metalworking
Berucut XC –
The new fluid generation of cutting
and grinding oils

BECHEM – Lubrication solutions for industry

As the oldest German manufacturer of industrial lubricants, BECHEM today is one of the leading producers of high-quality special lubricants and metal working fluids.

BECHEM products convince by innovative formulations in the most diverse of industrial applications – in machining and forming metal working processes, in coating technology and as for-life lubricants in various technical components.

A strong network of distributors and several national and international production sites ensure that BECHEM products are readily available worldwide.

Tomorrow’s technologies. Today.
For the highest of performances in metalworking: BECHEM XC Fluids

The new BECHEM XC Fluids establish a pioneering standard for metalworking fluids that are not mixable with water. Using innovative base fluids and synergistically active additive technologies results in new excellent performance benchmarks and optimized production processes. BECHEM XC Fluids have been developed for demanding metal cutting and make a compelling case given their higher flashpoints, low evaporation and reduced oxidation tendency, and they lead to increased performance and extended tool life.

The lubrication performance of a metalworking medium is closely tied to the viscosity-temperature behavior. In deep temperatures, too strong a rise of the viscosity is counterproductive, as the cooling and flushing capacity of the oil reduces. This is decisive whenever a process has not reached its operating temperature yet.

In very high temperatures, in contrast, the thickness of the available lubricant film is decisive because the aspect of cooling becomes less important. Compared to conventional metalworking oils, the Berucut XC series proves to have substantially better viscosity-temperature characteristics in both high as well as low process temperatures, whereby it contributes to a significant improvement of productivity.

The mineral-oil free BECHEM XC Fluids are based on synthetic base fluids and ensure a stable and safe production process. Users profit from improved work safety and low consumption. The continuously rising demands in metal cutting and machining processes require fluids with ever stronger performance. Berucut XC is the new generation of BECHEM metalworking fluids that have been developed today for the future already and which set the highest BECHEM standard.

The evaporation loss of a base oil in increased temperatures is closely tied to the aerosol load of the direct machine environment. The poorer the evaporation characteristics of a metalworking medium, the more must be invested in suitable extraction systems. Compared to conventional mineral oils, the evaporation loss could be lowered by more than one-quarter through the use of the BECHEM XC Fluids and the odor build-up could be reduced significantly as well.

Since there are proven hazards to health caused by numerous polycyclic aromatic hydrocarbons (PAH), research on how to substantially reduce their concentration in metalworking media has been underway for many years. Because PAH is a natural constituent of coal and crude oil, the choice of base fluids is of special importance.

The base oils of the Berucut XC series stand out in the ppb range (parts per billion) by virtue of an extremely low PAH concentration and they are therefore differentiated clearly from highly refined hydrocrack qualities. The Berucut XC series therefore contributes to raising work safety in metalworking.
Berucut XC impresses with outstanding characteristics

Advantages of the BECHEM XC Fluids

- Excellent oxidation stability
- Very high flashpoint
- Very high viscosity index
- Very low evaporation loss
- Very good UV stability
- Low pour point, good deep temperature behavior

- Very good lubrication performance
- High cutting speeds
- Good material compatibility
- Very good foam control
- Very low PAH values (polycyclic aromatic hydrocarbons)

In-vitro cytotoxicity

Products that are used in medical technology must fulfill particularly strict standards regarding their toxicity and compatibility with biological systems. For medical products with longer-term or permanent tissue contact, the biological safety test for biocompatibility according to ISO 10993 is mandatory. Berucut XC 1015 has passed the test for in-vitro cytotoxicity according to DIN EN ISO 10993-5:2009 with the best possible rating (0 reactivity).

In the processing of implants made of titanium, Berucut XC guarantees very good surface and processing quality.
Lubrication solutions for industry