



Cleaners and corrosion protection
for metal processing



BECHEM
LUBRICATION
TECHNOLOGY



System solutions for the metal-working process chain

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.

Optimally cleaned and protected against corrosion

In the metal-working industry, cleaning workpieces and semi-finished products is an important work step during the production process. Insufficient or incorrect cleaning often leads to considerable product deficiencies and faults.

The selection of the best-possible cleaner depends on the material to be cleaned, the system technology used and the type of impurities. BECHEM coordinates all of the products to be used and takes corrosion protection into consideration already during the first two stages.

Cleaning and corrosion protection procedures individually tailored to each other can contribute to significant cost reductions and economic efficiency of plant systems.

» Everything from one source – The BECHEM system solution provides for a fault-free process chain. «

Typical process chain in the metal-working industry



Development expertise and service

At BECHEM technical center, the latest chemical-physical testing and analysis systems are available that are used to characterize lubricants, to monitor their application, to analyze customer problems and finally to develop the appropriate lubricant solutions.

The BECHEM service department ensures the continuous improvement of processes:

- Inventory taking / on site analysis
- Analytics at the BECHEM technical center
- Development of customized system solutions
- Extensive tests in the work process
- Process-oriented technical implementation
- Optimization of service lives
- Improvement of working conditions for the user

The performance capacity of the products used and the technical service are crucial for the quality of the workpieces. BECHEM specialists have the necessary expertise to provide individual consultation to users and to assess the effectiveness of system solutions.

Professionals on the workpiece: Beruclean and Beruprotect

BEICHEM offers the **Beruclean** series both in aqueous and solvent-based products for the residue-free cleaning of any process fluids in metal-working covering a wide range of materials and cleaning processes.

Neutral cleaner

The **Beruclean** neutral cleaners are highly concentrated and therefore very economical in use. Even at high pressure and low temperatures they prevent foaming, have a very good demulsifying effect, an in-process corrosion protection, and provide for a self-cleaning effect in the washing systems. Due to the various application possibilities of **Beruclean** neutral cleaner, the number of products required for the process chain can also be reduced.

Mild and highly alkaline cleaners

Mild or highly alkaline **Beruclean** cleaners can be used for non-ferrous metals, zinc, aluminum and ferrous metals in ultrasound, spray and immersion cleaning systems.

Hydrocarbon cleaners

Beruclean hydrocarbon cleaners are particularly well-suited for cleaning organic contaminants, such as oil, grease or tar, due to their high solvent power. BEICHEM cold cleaners are virtually free of aromatic compounds and are characterized by a narrow boiling range, low consumption and short drying times.



Beruclean and Beruprotect products work together, complement each other perfectly and protect against production defects.

Influencing factors when choosing the right cleaner

An optimal cleaner affects the factors of time, temperature and costs.



Extreme corrosion influences act on the manufactured components, such as semi-finished products or vehicle components, during long international transport routes and storage times. BEICHEM offers the **Beruprotect**

Dewatering Fluids

Dewatering fluids are used for drying metal parts after treatment in an aqueous medium, such as after surface finishing in electroplating, after treatment in hardness salt solutions or after treatment with water-mixed cooling lubricants. The oily, waxy or Vaseline-type film that forms protects against corrosive atmospheric influences and, to a limited extent, also against mechanical stresses.

Corrosion protection oils

Corrosion protection oils are used to apply oily protective films of different strengths. Oily films form on the treated workpieces as protective barriers against moisture and corrosive components in the ambient air. Dry or oily-wet parts are therefore preserved for temporary storage. The corrosion protection effect of the pure oil film is enhanced considerably by modern additives for long-term indoor storage and (sea) transport. Humidity and other traces of water are partly absorbed by the protective film before they can penetrate to the base material and cause corrosion. BEICHEM corrosion protection oils are also suitable for untreated ferrous metals as well as for galvanized or phosphated material.

product range, specially tailored to these requirements. They include solvent, oil and water-based products for various applications of temporary corrosion protection.

Corrosion protection concentrates

BEICHEM corrosion protection concentrates are nitrite-free, water-soluble or emulsifiable corrosion inhibitors, which are used directly after the treatment of iron workpieces in water-mixed cooling lubricants. The processed workpieces are immersed in emulsions, which clean off the rest of the machining emulsion as well as metal shavings, salt residues and other impurities. After drying, a film is formed that protects the workpieces against corrosion. Wax emulsions leave behind particularly uniform and strong anti-slip films when the parts are immersed in a hot bath. The film thickness can be regulated via the concentration.

BEICHEM additives are added to process baths, such as KSS circuits or cleaning baths, in order to improve the corrosion protection or to prevent a non-ferrous metal corrosion. In addition to the post-conservation of processed parts, BEICHEM solutions are used for the neutralization of etchant residues.



Beruprotect: Ideal corrosion protection in the event of long transport routes and storage times

Lubrication Solutions for Industry



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