



For outstanding grinding results

The BECHEM Avantin and Berucut coolant lubricant series

Coolant lubricants for grinding processes where precision is critical

Where maximum grinding precision is required, more is needed than a standard coolant. Grinding determines quality, surface finish, dimensional accuracy, and process reliability.

Two product lines. One commitment: your grinding process.

From simple to extremely demanding grinding applications, we have developed high-performance lubricant lines that make the difference: BECHEM Avantin, the water-miscible coolant for stable production processes, and Berucut, the high-performance grinding oil for extreme material requirements. No matter how demanding your grinding process is, with BECHEM Avantin and Berucut, you have high-performance products at your side that do not just the job, but exactly what your grinding process needs.

BECHEM Avantin – For processes that must deliver outstanding results

BECHEM Avantin is a water-miscible coolant range that proves itself in day-to-day production with stable emulsions, excellent cooling performance, and reliable corrosion protection. It is used as a versatile solution for multi-metal applications and for series production machining. Suitable for a wide range of materials, including aluminum, steel, cast iron, and PEEK.

BECHEM Avantin stands for reproducible grinding processes at a consistently high level and delivers stable performance even under extreme thermal loads. Its excellent flushing performance also ensures that chips are reliably removed from the machining zone with minimal consumption and high process stability.



TALK TO US
ABOUT YOUR
GRINDING
PROCESS.

Berucut – For materials that do not forgive mistakes

Where grinding processes reach their limits, a high-performance grinding oil is needed that goes beyond standard solutions. The Berucut range is the forward-looking generation of BECHEM grinding oils, developed for extreme demands in metalworking and tailored to the wide variety of challenging materials. With Berucut, you can grind where others stop: ceramics, carbide, Inconel®, and other difficult-to-machine materials.

Berucut grinding oils are based on synthetic, mineral oil-free base fluids combined with synergistic additive technologies. They deliver high process reliability under heavy thermal loads, longer tool life, maximum lubrication performance in the grinding contact zone, and superior surface finishes.

High-performance lubricants that keep your grinding process reliably under control

Water-miscible, mineral oil-free, synthetic

PRODUCT	Mineral oil [%]		Processes	Description
		Lubrication		
Berucut 4000	0	••	General grinding, surface grinding, cylindrical grinding, and roll grinding	Fully synthetic formulation, excellent corrosion protection, excellent foam behavior, very good biostability, good skin compatibility, boron-free
BECHEM Avantin 405	0	•••	Grinding of HSS tools, bearings, and shafts; surface, cylindrical, double disc, and centerless grinding; grinding and polishing of materials used in ophthalmic lens production	Fully synthetic high-performance formulation, very good temporary corrosion protection, very low consumption, very good filtration properties, low drag-out, optimal cooling, boron-free
BECHEM Avantin 404 HM	0	•••	Grinding of carbide tools and components	Fully synthetic formulation with inhibition against cobalt leaching, good corrosion protection, high dirt-carrying capacity, excellent surface quality, low-foam, boron-free

• = low ... ••••• = very high

Water-miscible, mineral oil-based

PRODUCT	Mineral oil [%]		Processes	Description
		Lubrication		
BECHEM Avantin 421-30	30	••	General grinding, surface grinding, cylindrical grinding, centerless grinding, shaft grinding, and bearing grinding	Semi-synthetic formulation with excellent dirt-carrying capacity, very good corrosion protection, high emulsion stability, good filterability, very good flushing performance, good foam control, outstanding dirt-carrying capacity, boron-free
BECHEM Avantin 524	20	•••	General grinding, surface grinding, cylindrical grinding, centerless grinding, shaft grinding, and bearing grinding; ideal for components made of aluminum, fiber-reinforced composites, titanium, and nickel-chromium superalloys	Formulation with high biostability, pH-stable (buffered), very good aluminum compatibility, excellent corrosion protection, high cleaning performance, low top-up concentration, good skin compatibility

• = low ... ••••• = very high

Mineral oil-free grinding oils

PRODUCT	Kinematic viscosity [mm ² /s] at 40 °C		Processes	Description
		Flashpoint [°C]		
Berucut XC 2003	3	136	Grinding, ideal for carbide grinding and the grinding of high-alloy steels such as Inconel®	Very good surface finishes, low evaporation tendency, good foam behavior, long service life, low viscosity, and good dirt-dissolving capacity
Berucut XC 2005	6	175	Honing, grinding, high-speed grinding, and engraving; ideal for carbide grinding and the grinding of high-alloy steels such as Inconel®	Very good surface finishes, high dirt-carrying capacity, very good residue behavior, in vitro cytotoxicity according to DIN EN ISO 10993-5:2009 with reactivity rating 0, very good cooling properties, low evaporation tendency, very good flushing performance, low foaming tendency, chlorine-free
Berucut XC 2007	8	185	Honing, grinding, high-speed grinding, and engraving; ideal for carbide grinding and the grinding of high-alloy steels such as Inconel®	Very good surface finishes with very low evaporation tendency, high dirt-carrying capacity, in vitro cytotoxicity according to DIN EN ISO 10993-5:2009 with reactivity rating 0, very high flash point, very good cooling properties, very good flushing performance, low foaming tendency, chlorine-free
Berucut XC 2010	10	190	High-speed grinding of high-strength steels such as Inconel® and carbide, as well as tooth flank grinding	Developed for HSG applications in aerospace and medical technology, very good flushing performance, low evaporation tendency, very good air release properties, high flash point, very good cooling performance, high dirt-carrying capacity, low foaming, chlorine-free
Berucut XC 1010	13	185	Machining, as well as profile grinding, deep grinding, and tooth flank grinding. Suitable for high-strength steels such as Inconel®, superalloys, and carbide	Strong AW/EP additive package, high load-carrying capacity, low tool wear, suitable for high cutting speeds, very good flushing performance, low evaporation, good corrosion protection, chlorine-free and free of heavy metals

Metalworking and grinding



Benefit from our
experts' know-how



LUBRICATION SOLUTIONS FOR INDUSTRY

CARL BECHEM GMBH · Weststr. 120 · 58089 Hagen · Germany · Phone +49 2331 935-0 · bechem@bechem.de · www.bechem.com