



Lubricants for massive forming  
Cold, semi-hot and hot forging



# Tailor-made solutions for each application

New forming technologies in the forging industry as well as increasing energy costs and more severe environmental requirements call for high responsibility when handling lubricants in the forming technology.

Combinations of hot/cold or semi-hot/cold processes set high standards to the lubricant manufacturers with regard to application and removability of the lubricants after the process.

Thanks to intensive R & D work, as well as the participation in various international and national research projects the company BECHEM has successfully tailored their lubricants to the corresponding application. Most modern test and control benches allow a very good pre-selection already during the early stage of development.

Graphite containing, water miscible	
<b>BERUFORGE 100</b>	MoS <sub>2</sub> containing coating lubricant for cold forging. The use of special additives allows abandoning phosphatised surfaces.
<b>BERUFORGE 170</b>	MoS <sub>2</sub> containing coating lubricant for cold forging. Blasted surfaces allow abandoning phosphatisation. Use of finest MoS <sub>2</sub> particles.
<b>BERUFORGE 190</b>	MoS <sub>2</sub> containing coating lubricant for phosphatised surfaces.
<b>BERUFORGE 393 G</b>	Graphite-poor lubricant with waxy parts and good release effect up to 300 °C. Suitable for aluminium and magnesium forming.
<b>BERULIT 906 HP</b>	Suitable for die and precision forging at tool temperatures up to 380 °C. Particle size of the graphite 6 µm.
<b>BERULIT 912</b>	Suitable for die and precision forging at tool temperatures up to 380 °C. Particle size of the graphite 12 µm.
<b>BERULIT 913</b>	Suitable in semi-hot forging as pre-coating of the pieces, scale inhibiting effect during heating. Used for groove rolling and manufacture of seamless tubes.
<b>BERULIT 935</b>	Used in semi-hot forging as pre-coating of the pieces. High coating thicknesses. Avoids scale formation. High temperature stability.
<b>BERUTHERM 385 W</b>	Good adhesion allows forming of tool temperatures up to 420 °C. Used for aluminium extrusion.



Field of Application	BERUFORGE 100	BERUFORGE 150 D	BERUFORGE 150 DL	BERUFORGE 170	BERUFORGE 182	BERUFORGE 190	BERUFORGE 200 CU	BERUFORGE 2002 B	BERUFORGE 350
<b>Cold forging</b>	■	■	■	■		■			
<b>Coating</b>	■	■	■		■				
<b>Die forging</b>									
Hammer forging								■	■
Press forging								■	■
Valve forging									
High speed forging							■		
Aluminium forging		■							
<b>Semi-hot forging</b>									
Multiple stage presses								■	
Rotary forging	■			■		■			
Coating of blank parts	■	■	■	■	■	■			
<b>Tube production</b>									
Coating of mandrel bars									
Tube expansion									
<b>Hot rolling</b>									
Profile and plain surface rolling								■	
Ring and axial die rolling								■	
<b>Graphite free</b>		■	■		■		■	■	■
<b>Graphite containing</b>	■			■		■			



<b>BERUFORGE 393 C</b>	<b>BERUFORGE 393 G</b>	<b>BERUFORM Z 1</b> Powder-cold forging	<b>BERULIT 392</b>	<b>BERULIT 645</b>	<b>BERULIT 720</b>	<b>BERULIT 740/88</b>	<b>BERULIT 740/88 M/TRW</b>	<b>BERULIT 906 HP</b>	<b>BERULIT 912</b>	<b>BERULIT 913</b>	<b>BERULIT 935</b>	<b>BERUTHERM 385 W</b>
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### Graphite free, water miscible

<b>BERUFORGE 150 D</b>	Suitable for die forging of aluminium alloys. As phosphate-free coating lubricant also suitable for cold forging.
<b>BERUFORGE 150 DL</b>	Wax containing paste for drawing of wires, tubes and profiles on phosphate-free surfaces.
<b>BERUFORGE 182</b>	Coating material which prevents from scale formation up to 2180 °C and simultaneously avoids welding of the blank parts in the furnace.
<b>BERUFORGE 200 CU</b>	Circulation lubricant to be used on HATEBUR forging presses. Very good separation of ingressed oils and protection against non-ferrous metal corrosion.
<b>BERUFORGE 350</b>	Suitable for die forging of steel at tool temperatures up to 350 °C. Synthetic basis, pigment free. Well suitable for application in forging hammers.
<b>BERUFORGE 393 C</b>	Suitable for die forging of steel at tool temperatures up to 260 °C. Thanks to the content of waxy effective substances suitable for forward and backward extrusions. Pigment free.
<b>BERUFORGE 2002 B</b>	Suitable for die forging of steel at tool temperatures up to 300 °C. Thanks to special ingredients good lubricating effect.
<b>BERULIT 392</b>	Universal low-cost pigment free release agent for forming of steel at tool temperatures up to 260 °C. Ideal combination with BERULIT 913 in semi-hot forging as pre-coating.

### Graphite containing, mineral oil containing

<b>BERULIT 645</b>	Suitable for die forging and hot extrusion of steel and non-ferrous alloys. Special colloid graphites allow extrusion processes with long flow path.
<b>BERULIT 720</b>	Suitable for die forging and hot extrusion of steel, hollow extrusion of brass alloys. Highly viscous base oil for the use in the upper tool temperature range.
<b>BERULIT 740/88</b>	Suitable for die forging and hot extrusion of steel and brass, especially for the production of all types of hollow parts.
<b>BERULIT 740/88 M/TRW</b>	Thanks to special additives well suitable for valve forging operations on electrical heading machines.

### Others

<b>BERUFORM Z 1</b>	Very fine MoS <sub>2</sub> wax powder. Suitable for cold calibration of steel parts. Very smooth surfaces after the forming process.
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## Lubrication solutions for Industry

With over 175 years of experience, BECHEM is one of the leading manufacturers of premium quality special lubricants and metal working fluids.

Close cooperation with research institutes, industry partners and product users as well as the knowledge, skills and major commitment by our staff are guarantees of new and innovative high performance lubricants, which contribute to the success of our customers at home and abroad.

A powerful network of distributors and several national and international production sites ensure our products are readily available worldwide.

**Tomorrow's technologies. Today.**

