



Lubricant solutions for the pulp and paper industry

BECHEM – Lubrication solutions for industry

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









BECHEM products stand out through innovative formulations in the most diverse industrial applications – in machining and forming for metalworking 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.

Please inquire about special solutions for your specific application.

APPLICATIONS

- Roller bearings 
- Plain bearings 
- Open gears 
- Closed gears 
- Hydraulic 
- Chains 
- Wire ropes 
- Food grade/
Pharmaceutical technology 

PROPERTIES

- High loads 
- Low temperatures 
- High temperatures 
- High speed 
- Noise damping 
- Resistant to water 
- Good pumpability 
- Low foaming 
- Corrosion protection 
- Compatible with plastics 
- Good rinsing performance 
- Low residue level 

All indications and values correspond to latest knowledge and do not represent any product specification

Wood treatment

In mechanical and thermal-mechanical wood treatment, machines and systems are exposed to great deals of water and are subjected to high mechanical stresses during milling and defibration. As the systems and possible production losses present major cost factors, and generally there are no redundant systems, choosing the right lubricant is essential. Using tailored BECHEM lubricants can reduce losses, maintenance costs and downtimes while meeting demands for high efficiency and system availability.

In wood treatment processes at pulp and paper plants, lubricants from the **BECHEM High-Lub FA 67 series** sat-

isfy requirements for high mechanical stability, high load bearing capacity, excellent water resistance and outstanding corrosion protection. The products surpass other conventional lubricants in terms of their capability to prevent stand-still corrosion especially and thus extend the service life of bearings filled with these greases.

Lubricants from the **BECHEM High-Lub SW 2 series** are especially effective with their water-repellent properties, allowing them to be applied to wet surfaces.



Debarking

Lubricants, such as the **BECHEM High-Lub FA series** for main bearings, were designed with outstanding product properties for the most extreme requirements in lubricating bearings of debarking drums or rotor drives. Open gear drives and loose tires can be supplied dependably with the **Berulit GA series**. Thanks to their excellent adhesion to metal surfaces without being dust-binding, they ensure low consumption rates. This also prevents them from being washed away by water.



Milling

The ball bearings in choppers, grinders and refiners are exposed to extremely high and often shock loads, as well as the effects of water. Refiners also see temperatures of up to 130 °C. Despite short relubrication intervals, bearing damage often occurs prematurely. The **BECHEM High-Lub FA 67 series** and **Berutox M 21 series** present lubricating greases with a very high mechanical stability that reliably protect the bearings from wear, corrosion and premature failure.



BECHEM lubricants stand out in terms of performance and efficiency in all areas of the paper industry.

Chemical preparation

Systems performing the boiling and bleaching processes with aggressive cooking liquors based on oxygen, sulfur or chlorine compounds have to meet especially high requirements in terms of lubricant chemical resistance. The lubricants used must not embrittle, harden or be prone to heavy oxidation when coming into contact with aggressive chemicals. These properties are necessary to prevent premature bearing failures. The heavy weight of the boiling chamber and tanks, low speed and vertical arrangement of many bearings also place high demands on lubricating film strength, wear protection and mechanical stability.

Polyurea-based lubricants from the **Berutox M 21** and **Berutox FH 28 series** as well as PTFE-based lubricants from the **Berutox VPT series** and **Berutemp 500 T2** have proven their superiority to competitor products in bearings of many paper plants in terms of mechanical, thermal and chemical resistance.

Bearings on washers, dewatering presses and systems for processing recycled paper are often exposed to the strong influences of water or water vapor. Lubricating greases from the **BECHEM High-Lub FA series** ensure reliable protection with minimum consumption.

The **Berulub OX series** features nationally certified lubricants for oxygen-carrying fittings.

For efficient operation of closed gears, BECHEM offers various mineral oil-based and synthetic oil-based gear oils with different performance characteristics.

Paper machine

Paper machines are in operation non-stop. Downtime is only acceptable for planned maintenance and repair work. This is why maximum operating reliability hinges not only on component design, but also on choosing the right lubricant.

At the wet end, the lubricating grease has to help seal the bearing and prevent water penetration. Studies have shown that a lubricant water content above 200 ppm drastically reduces the service life of roller bearings. Corrosion in the bearing has a similar negative effect. This is why lubricants must ensure excellent corrosion protection. Lubricating greases from the **BECHEM High-Lub FA 67 series** and **Berutox M 21 series** meet these demands

and are ideal for bearings in the headbox, the wire section and the press section.

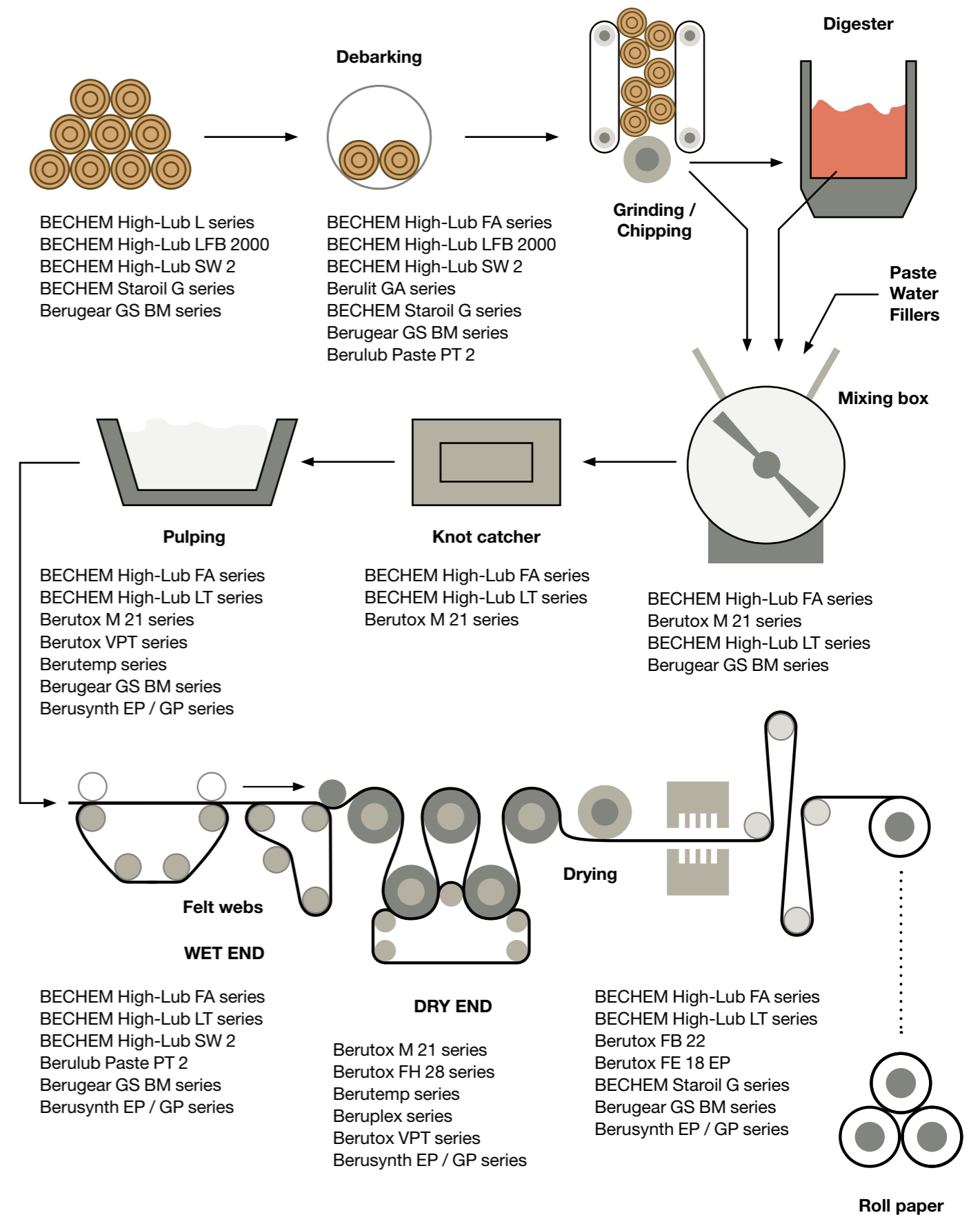
The dry end places strict thermal and oxidative resistance requirements on the lubricants. In addition, the operating speeds of bearings are much higher in the dry end and reel section. Various greases from the **Beruplex** and **Berutox series** are used for different bearing dimensions and operating conditions, such as bearing load, operating speeds and temperatures. BECHEM application engineers would be happy to provide you with consultation.

Special tailored lubricant solutions are available for oil circulation systems, chain drives and rotary joints.



BECHEM lubricants are used in paper production for maximum operating reliability.

Example applications for BECHEM lubricants



Paper finishing

Surface treatment

Lubricating greases from the **Beruplex** and **Berutox series** are used in the bearings of size presses and calendars.

Berutox FB 22 has proven effective in high-speed roller bearings of guide rollers. The lubricating grease ensures high mechanical stability, low oil separation, low friction values and clean rolling of the rolling elements, even at very high speeds.

Packaging

Synthetic lubricating grease **Berutox FB 22** is also used to lubricate roller bearings in slitting and sheeting machines, as it does not escape from the bearings or tend towards higher oil separations, even at high speeds.

Oiling the cutting edge with **Berusynth 15 H1** can extend the service life of roller cutters significantly. This colorless lubricating oil reduces wear and prevents excessive paper fiber adhesion.

Special papers

Food-grade lubricants with H1 or H2 registration should be used for processing papers that are later used for food packaging, cigarettes or hygiene products. Lubricating greases from the **Berulub FG-H series** meet the relevant machine and system requirements. For bearings with oil lubrication, chain drives and other mechanisms, the **Berusynth H1 series** of fully synthetic multi-functional oils is available in many viscosity classes.



BECHEM lubricants meet the requirements for producing hygiene products.



Paper rolls are reliably cut to the desired width with the help of BECHEM lubricants.

Corrugated board

Owing to internal heating of the corrugated rolls in corrugated board plants and the resulting high operating temperatures, the lubricants have to meet very high requirements in terms of their thermal aging resistance. As forming the corrugations results in strong vibrations, the lubricating greases must also feature excellent mechanical stability as well as very low oil separation.

For these operating conditions, PFPE greases of the **Berutox VPT series** or **Berutemp 500 T2** are recommended. In bearings of corrugated rolls with low operating temperatures, **Berutox FH 28 KN** can also be used.

The **Beruplex LI-EP 2** and **Berutox FE 18 EP** have proven themselves in application for lubricating fan bearings.

Application of **Berusynth 15 H1** can reduce wear on the cutting edges of the slitting machines significantly.



BECHEM lubricants were designed for the extreme thermal conditions of corrugated board production.

Lubricating greases

For bearings in pumps and water treatment systems, lubricating greases from the **BECHEM High-Lub FA series** and **BECHEM High-Lub SW 2** offer excellent water resistance and outstanding corrosion protection.

Lubricating greases from the **Beruplex** and **Berutox series** are ideal for lubricating bearings of fans in the soda house or recirculation fans that are exposed to extreme thermal stress.

Depending on the operating temperature, **BECHEM High-Lub LT 2 EP**, **Berutox FE 18 EP** or **Berutox FB 22** are recommended for bearing lubrication and electric motors.



| PRODUCT | Base oil | | Thickener | NLGI-grade | Kinematic viscosity at 40 °C / 100 °C [mm ² /s] | | Working temperature range [°C] ¹⁾ | Process / Applications | Description |
|---|-------------|-----------------------|-----------|-----------------|--|--|--|------------------------|-------------|
| | | | | | | | | | |
| BECHEM Premium ²⁾ | Mineral oil | Lithium-Calcium-Soap | 2* | 90-110 10-13 | -30 +130 | Multipurpose grease | Long-term lubrication grease for high loads, excellent corrosion and wear protection, extends relubrication intervals | | |
| BECHEM High-Lub LT 2 EP | Mineral oil | Lithium soap | 2 | 180 15 | -30 +140 | Multipurpose grease | Multi-purpose EP-grease, wide application temperature range, excellent water resistance, excellent corrosion and wear protection, excellent pumpability in central lubrication systems | | |
| BECHEM High-Lub FA 67-2 | Mineral oil | Lithium-Calcium-Soap | 2 | 100 11 | -30 +130 | Electric motors and fan bearings | Long-term lubricating grease, excellent corrosion and wear protection, suitable for high loads and high speeds, excellent water resistance and pumpability | | |
| BECHEM High-Lub LFB 2000 | Mineral oil | Lithium soap | 2 | 180 15 | -20 +140 | Wood shredders, wood grinders, bark shredders | EP-grease, wide application temperature range, excellent pumpability and water resistance, excellent corrosion and wear protection, contains light-colored solid lubricants, emergency running properties | | |
| BECHEM High-Lub LT 2 EP-400 | Mineral oil | Lithium soap | 2 | 430 27 | -20 +140 | Wood shredders, wood grinders, bark shredders | Heavy-duty grease, extensive application temperature range, excellent water resistance, excellent corrosion protection, excellent pumpability, increased base oil viscosity, EP-properties | | |
| BECHEM High-Lub FA 67-400 KS | Mineral oil | Lithium-Calcium-Soap | 2 | 400 30 | -20 +140 | Wood shredders, wood grinders, bark shredders, pulpers, wet end of the paper machine | Long-term lubricating grease, good sealing qualities, excellent water resistance, outstanding corrosion protection, good pumpability in central lubrication systems, EP-properties | | |
| BECHEM High-Lub FA 50 | Mineral oil | Lithium-Calcium-Soap | 2 | 920 42 | -20 +120 | Main bearing for cellulose and dewatering presses, support roller bearings | Long-term lubrication grease for high to very high loads, excellent water resistance, excellent corrosion protection, contains highly-viscous mineral base oil and EP-additives | | |
| BECHEM High-Lub FA 50 MO | Mineral oil | Lithium-Calcium-Soap | 2 | 1200 47 | -20 +120 | Support roller bearings, main bearings of bark presses and dewatering presses | Long-term lubricating grease for high to very high loads, excellent water resistance, excellent corrosion protection, even if there is risk of standstill corrosion, highly viscous mineral oil, contains solid lubricants and EP-additives | | |
| BECHEM High-Lub SW 2 | Mineral oil | Special calcium soap | 1-2 | 100 9 | -25 +80 | Roller bearings & guides for wood treatment & paper recycling under strong water influence | Corrosion protection grease for roller bearings, plain bearings, and ropes, for aggressive ambient conditions, extremely high level wear protection through EP additives, water-resistant, excellent corrosion protection, excellent pumpability | | |
| Beruplex LI-EP 2 | Mineral oil | Lithium complex soap | 2 | 180 6 | -30 +150 | Roller bearings and plain bearings in the dry end of the paper machine | Long-term EP-grease, excellent corrosion and wear protection, excellent pumpability, even under shock load, protection against high temperatures and moisture, e.g. for wheel bearings, electric motor bearings | | |
| Beruplex LI-EP 3 ²⁾ | Mineral oil | Lithium complex soap | 3 | 180 6 | -30 +150 | Roller bearings and plain bearings in the dry end of the paper machine | Long-term EP-grease, excellent corrosion and wear protection, excellent pumpability, even under shock load, protection against high temperatures and moisture, e.g. for wheel bearings, electric motor bearings | | |
| Beruplex HTA | Mineral oil | Aluminum complex soap | 2 | 230 15 | -25 +190 +200 | Roller bearings and plain bearings in the dry end of the paper machine | High-temperature grease with a wide application temperature range, good corrosion protection, excellent pumpability in central lubrication systems, for dusty environments | | |
| Berutox FE 18 EP | Mineral oil | Polyurea | 2 | 100 11 | -20 +140 | Electric motors and fan bearings | High-performance grease to lubricate high-speed roller and plain bearings, excellent water resistance, excellent corrosion and wear protection, excellent pumpability | | |
| Berutox M 21 KN | Mineral oil | Polyurea | 1-2 | 490 32 | -20 +180 | Roller bearings and plain bearings in the dry end of the paper machine, fan bearings | Long-term lubricating grease, outstanding consistency-temperature-behavior, excellent resistance to water, excellent corrosion and wear protection, EP-properties | | |

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¹⁾ Value marked in grey indicates short term maximum temperature. ²⁾ Not available worldwide. Please inquire about country-specific special solutions.
^{*} Also available in other consistency classes.

Lubricating greases

A number of different lubricating greases are used in the chemical recovery process. When it comes to lubricating open drives and the seals of lime kilns, adhesive lubricants of the **Berulit GA series** stand out thanks to their excellent wear protection and low consumption rates. **The Berulit GA series** is also recommended for lubricating gear racks, e.g. of the soot blower in the soda house.

BECHEM High-Lub FA 67-400 KS ensures the reliable supply of grease-lubricated bearings in the supporting rollers and pinions of lime kilns with relubrication intervals of several months.

For lubricating floating races on lime kilns, **Berulub VPN 13 Ringlub** presents a semi-liquid high-temperature lubricant that only has to be applied every two to four weeks thanks to its high solid content. The synthetic carrier fluid prevents strong smoke development or fires, even when applied to very hot kiln surfaces.



| PRODUCT | PRODUCT | | NLGI-grade | Kinematic viscosity at 40 °C / 100 °C [mm ² /s] | | Working temperature range [°C] ¹⁾ | | Process / Applications | Description | |
|---------------------|--|-------------------------------|--------------------------------|--|----------------|--|-----------|------------------------|---|--|
| | Base oil | Thickener | | 40 °C | 100 °C | min | max | | | |
| Lubricating greases | Berutox M 21 EPK | Mineral oil | Polyurea | 1-2 | 490 | 32 | -20 | +160 | Roller bearings and plain bearings in the wet and dry ends of the paper machine | Multi-purpose grease for plastic/metal slide pairings, high corrosion and wear protection, good adhesion, resistant to oxidation, water, and steam, water repellent, EP-properties |
| | BECHEM Ceritol PSA 12 H | Mineral oil | Special polyurea | 1-2 | 240 | 17 | -20 | +160 | Roller bearings and plain bearings in the dry end of the paper machine, fan bearings | High-temperature grease, no pipe clogging in central lubrication systems even in case of thermal radiation, excellent sealing qualities, good corrosion and wear protection |
| | Berutox MB 2-H | Mineral oil | Polyurea | 2 | 300 | 18 | -5 | +200 +220 | Main bearings of refiners, bleachers and stirring boilers | Long-term lubricating grease with outstanding sealing capacities, good wear protection, reliable corrosion protection even in presence of aggressive water |
| | Berutox FB 22 | Polyalpha-olefin (PAO) | Barium complex soap | 2 | 50 | 8 | -40 | +180 +200 | Electric motor bearings and fan bearings, bearings of guide rollers and slitting machines | For long-term lubrication at high speeds, good consistency-temperature-behavior, excellent water resistance, excellent corrosion and wear protection, good pumpability |
| | Berutox FH 28 KN | Polyalpha-olefin (PAO) | Polyurea | 1-2 | 400 | 40 | -30 | +180 +200 | Roller and plain bearings in the dry end of the paper machine, on drying units and corrugated board plants | Synthetic long-term lubricating grease, outstanding consistency-temperature behavior, excellent chemical and water resistance, excellent corrosion and wear protection, EP-properties |
| | Berutox FH 28 EPK 2 | Polyalpha-olefin (PAO) | Polyurea | 2 | 400 | 40 | -30 | +180 | Roller bearings and plain bearings in the dry end of the paper machine and on drying units | Long-term lubricating grease, outstanding consistency-temperature behavior even at overheating, excellent resistance to water, excellent corrosion and wear protection, EP-properties |
| | Berutox VPT 54 | Perfluoropolyether (PFPE) | Polytetrafluoroethylene (PTFE) | 1-2 | 210 | 20 | -30 | +230 | Roller bearings and slide bearings on drying ovens, bleachers and corrugated board plants | Longlife lubricating grease to reduce friction and wear at high temperatures, suitable for all sliding speeds permitted for grease lubrication, resistant to thermal and chemical decomposition, excellent oxidation resistance and plastic compatibility |
| | Berutemp 500 T2 | Perfluoropolyether (PFPE) | Polytetrafluoroethylene (PTFE) | 1-2 | 510 | 45 | -20 | +260 | Roller bearings and slide bearings on drying ovens, bleachers and corrugated board plants | Long-term lubricating grease, even for vacuum, radiation, solvents and aggressive chemicals, outstanding compatibility with plastics, high thermal stability, high wear and corrosion protection, resistant to acids, bases, disinfectants |
| | Berulub FG-H 2 SL | Synthetic hydrocarbon | Special calcium complex soap | 2 | 50 | 8 | -45 | +160 +200 | Roller bearings and plain bearings in the finishing of paper that can later come into contact with foodstuffs | High-performance lubricant, good adhesion and sealing properties, resistant to water and aging, reliable corrosion protection, suitable for central lubrication systems, H1 registered, Halal and Kosher certified, certified according to ISO 21469 |
| | Berulub FG-H 2 EP | Polyalpha-olefin (PAO) | Special calcium complex soap | 1-2 | 150 | 18 | -40 | +160 | Roller bearings and plain bearings in the finishing of paper that can later come into contact with foodstuffs | Universal lubricant, high load-carrying properties, good adhesion and sealing effect, reliable corrosion protection and wear, resistant to ageing, water, disinfectants and cleaners, H1 registered, halal and kosher certified, certified according to ISO 21469, available in aerosols |
| Adhesive lubricants | Berulit GA 400 → 2500 | Mineral oil/ Synthetic oil | Aluminum complex soap | 0-00 00 | 490 2500 | 32 100 | -20 +5 | +180 +200 | Open gear drives of debarking and drying drums, lime kilns, pulpers, inlet seals of rotary kilns | Operating lubricant for open gear drives, extremely high base oil viscosity, excellent wear protection, extremely high load-carrying capacity, good adhesion, contains graphite, preferably applied by spray equipment, Berulit GA 2500 also available in aerosols |
| | Berulit GA 800 → 2500 Fluid | Mineral oil/ Synthetic oil | Aluminum complex soap | 000* | 1000 3175 | 45 113 | -10 0 | +120 +200 | Open gear drives of debarking and drying drums, lime kilns, pulpers | Operating lubricant for open gear drives, increased base oil viscosity, excellent wear protection, very high load-carrying capacity, strong adhesion, contains graphite, suitable for dip baths or circulating systems, sprayable |
| | Berugear HV 10 → HV 20 | Mineral oil/ Synthetic oil | - | - | 10000 18500 | 320 550 | 0 +10 | +120 +140 | Open gear drives of debarking and drying drums, lime kilns, pulpers | High-performance fluid with extremely high base oil viscosity for open and slow-running closed gear units, excellent wear protection, very high load-carrying capacity, excellent adhesion |

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¹⁾ Value marked in grey indicates short term maximum temperature. *Value indicates unworked penetration.

Lubricating oils

Compared with mineral-oil-based gear and circulating oils, synthetic lubricating oils from the **Berusynth GP** and **Berusynth EP series** offer better aging resistance and thus extend oil change intervals, even at high operating temperatures. Thanks to lower friction values, it is also possible to reduce oil sump temperatures and losses in closed gears.

The **Berugear GS BM series** was developed for use in high-load gears with previous damage. Owing to special high-performance additives, the lubricating oils are capable of bonding highly effective reaction layers with a very high pressure capacity on the contact surfaces, enabling micro-plastic deformation of upper surface layers. The coefficient of friction in the contact area is also reduced.

For temperature-stressed chains in the dry end of paper machines and drying units, **Berusynth CU 250** presents a special synthetic chain oil with a low evaporation rate and low residue formation.



| PRODUCT | Base oil | | | | | Specification | Type | Process / Applications | Description | |
|----------------------|---|---|-----------------|----------------|------------------|----------------|-------------------|---------------------------------|---|--|
| | Base oil | Viscosity (mm ² /s) at 40 °C | Viscosity index | Pourpoint [°C] | Flash point [°C] | | | | | |
| Lubricating oils | BECHEM Staroil NR 10 → 68 🔧 🛢️ | Mineral oil | 10 to +68 | 95 | -30 to -24 | ≥ 150 to ≥ 230 | DIN 51524-2 | HLP | Hydraulic equipment | Hydraulic oil with high thermal stability and resistance to oxidation, excellent protection against wear and corrosion, excellent air and water separation capacity as well as outstanding viscosity/temperature behavior, free of zinc |
| | BECHEM Staroil LV 46 → 150 🔧 🛢️ | Mineral oil | 46 to 150 | 95 to 105 | -9 to -7 | ≥ 230 to ≥ 240 | DIN 51506 | VDL | Compressors | Additive containing compressor oil with high oxidation and temperature resistance, good protection against corrosion, low formation of residues, water repellent, good adhesion, considerably exceeds the requirements of VCL/VBL oils |
| | BECHEM Staroil G 100 → 680 🔧 🛢️ | Mineral oil | 100 to 680 | 95 to 100 | -33 to -18 | ≥ 230 to ≥ 270 | DIN 51517-3 | CLP | Gear units in the normal temperature range | High-performance gear oil for spur, bevel, planetary and worm gears, excellent wear protection, very high ageing resistance, good load-carrying capacity and viscosity/temperature behavior, excellent water and air separation capacity |
| | BECHEM Staroil SMO 68 → 1500 🔧 🛢️ | Mineral oil | +68 to 1350 | 90 to 100 | -33 to -9 | ≥ 210 to ≥ 250 | DIN 51517-3 | CLPF | Gear units with increased wear protection requirements | High-performance gear oils for heavy-duty gear units with high contact pressure or shock loads, good load-carrying capacity, excellent wear protection, good viscosity-temperature behavior, very high ageing resistance, excellent water and air separation capacity |
| | Berugear GS 68 → 680 BM 🔧 🛢️ | Mineral oil | +68 to 738 | 92 to 100 | -30 to -15 | ≥ 210 to ≥ 290 | DIN 51517-3 | CLP | Gear units with increased requirements relative to wear protection and minimal power loss | High-performance oil for heavy-duty gears, contains PD-additives, excellent wear protection, very high resistance to micropitting, forms reactive surface layer that supports plastic deformation and thus increases the contact area, highly effective on gears with high percentages of sliding friction |
| | Berusynth GP 68 → 1000 🔧 🛢️ | Polyalphaolefin (PAO) | 67 to 1007 | 145 to 165 | -60 to -27 | ≥ 245 to ≥ 280 | DIN 51517-3 | CLP HC | Gear units with higher oil sump temperatures or higher requirements relative to extended oil change intervals | High-performance gear oil on polyalphaolefin basis for heavy-duty spur, bevel, planetary and worm gear units, allows extended oil changing intervals, excellent wear protection, very high ageing resistance, miscible with mineral oil |
| | Berusynth EP 68 → 1000 🔧 🛢️ | Polyglycol | +68 to 1000 | 196 to 278 | -42 to -30 | ≥ 240 to ≥ 280 | DIN 51517-3 | CLP PG | Gear units with higher oil sump temperatures or higher requirements relative to extended oil change intervals | High-performance gear oil on polyglycol basis for heavy-duty spur, bevel, planetary and worm gears, allows extended oil changing intervals, excellent wear protection, very high ageing resistance, reduces tooth friction losses in the gear unit |
| | Berusynth CU 250 🔧 🛢️ | Ester | 250 | 120 | -45 | ≥ 250 | H2 | | Drive chains in the dry end of the paper machine and on drying units | High-temperature chain oil, wide application temperature range, excellent wetting and creeping properties, hot and cold water resistant, good corrosion protection, no formation of critical residues, H2-registered, adjusted to Berusynth CC 100, also available in aerosols |
| | Berulfluid WO 🔧 🛢️ | Medical white oil | 17 | 98 | -10 | ≥ 170 | H1 | AN | Cutters and mechanisms for which the paper can later come into contact with foodstuffs | Medical white oil, odorless and tasteless, water repellent, excellent corrosion protection, removes contamination, high creeping capacity, resin-free and acid free, medically pure |
| | Berusynth 15 H1 → 1000 H1 🔧 🛢️ | Polyalphaolefin (PAO) | 15 to 1000 | 125 to 165 | -65 to -35 | ≥ 170 to ≥ 260 | H1, Halal, Kosher | HLP HC, CLP HC, HVLP HC, VDL HC | Multi-purpose oil for reduced ranges, also for higher temperatures and extended oil changing intervals | High-performance oil for circulation lubrication, transport chains, hydraulic equipment, gear units, blowers, air compressors, effective corrosion and wear protection, neutral to conventional seals and paints, good load-carrying capacity, certified according to ISO 21469 |
| Special applications | Berulub VPN 13 Ringlub 🔧 🛢️ | Synthetic oil | approx. 140 | - | - | ≥ 300 | - | ANPFE | Floating tires of rotary kilns | High-temperature fluid, sprayable, excellent wear protection, very high ignition temperature, low smoke development on hot surfaces |
| | Berusynth H1 Spray 🔧 🛢️ | Polyalphaolefin (PAO) | 100 | 140 | -50 | - | H1, Halal | | Multi-purpose spray for the production of paper that later can come into contact with foodstuffs | Transparent chain oil/adhesive oil, good corrosion and wear protection, high load-carrying capacity, solvent free |
| | Beruclean ECO 🔧 🛢️ | | | | | ≥ 65 | H1, Halal, Kosher | | Cold cleaning agent for the production of paper that later can come into contact with foodstuffs | Universal cold cleaner, free of aromatic hydrocarbons, virtually odorless, strong dissolution effect, good cleaning effect, quickly biodegradable according to OECD 301 F, A7 |

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