



Arcanol Rolling Bearing Greases

Grease selection for typical applications

Arcanol Greases

| | Grease | Characteristic applications | Operating temperature °C | | Continuous limit temperature °C | Thickener | Base oil | Consistency NLGI | Base oil viscosity at +40 °C mm ² /s | Temperatures | | Low friction, high speed | High load, low speed | Vibrations | Support for seals | Relubrication facility | |
|-------------------------|----------|--|--------------------------|------|---------------------------------|-----------------------|-------------------------|------------------|---|--------------|------|--------------------------|----------------------|------------|-------------------|------------------------|----|
| | | | from | to | | | | | | low | high | | | | | | |
| Multipurpose greases | MULTITOP | Ball and roller bearings in rolling mills, Construction machinery, Spinning and grinding spindles, Automotive engineering | -50 ¹⁾ | +140 | +80 | Lithium soap | Partially synthetic oil | 2 | 82 | ++ | + | + | ++ | + | • | ++ | |
| | MULTI2 | Ball bearings up to 62 mm outside diameter in small electric motors, Agricultural and construction machinery, Household appliances | -30 | +120 | +75 | Lithium soap | Mineral oil | 2 | 110 | + | • | • | • | • | • | • | ++ |
| | MULTI3 | Ball bearings from 62 mm outside diameter in large electric motors, Agricultural and construction machinery, Fans | -30 | +120 | +75 | Lithium soap | Mineral oil | 3 | 80 | + | • | • | • | + | + | + | + |
| High loads | LOAD150 | Ball, roller and needle roller bearings, Linear guidance systems in machine tools | -20 | +140 | +95 | Lithium complex soap | Mineral oil | 2 | 160 | • | + | - | ++ | + | + | + | + |
| | LOAD220 | Ball and roller bearings in rolling mill plants, Paper machinery, Rail vehicles | -20 | +140 | +80 | Lithium/calcium soap | Mineral oil | 2 | 245 | • | • | - | ++ | + | + | + | + |
| | LOAD400 | Ball and roller bearings in mining machinery, Construction machinery, Wind turbine main bearings | -40 | +130 | +80 | Lithium/calcium soap | Mineral oil | 2 | 400 | • | • | - | ++ | + | + | + | + |
| | LOAD460 | Ball and roller bearings, Wind turbines, Bearings with pin cage | -40 ¹⁾ | +130 | +80 | Lithium/calcium soap | Mineral oil | 1 | 400 | + | • | - | ++ | + | - | - | + |
| | LOAD1000 | Ball and roller bearings in mining machinery, Construction machinery, Cement plants | -30 ¹⁾ | +130 | +80 | Lithium/calcium soap | Mineral oil | 2 | 1000 | • | • | --- | ++ | + | + | + | + |
| High temperature ranges | TEMP90 | Ball and roller bearings in clutches, Electric motors, Automotive engineering | -40 | +160 | +90 | Poly-carbamide | Partially synthetic oil | 3 | 148 | ++ | + | • | • | • | • | + | + |
| | TEMP110 | Ball and roller bearings in electric motors, Automotive engineering | -35 | +160 | +110 | Lithium complex soap | Partially synthetic oil | 2 | 130 | ++ | ++ | + | • | • | • | • | • |
| | TEMP120 | Ball and roller bearings in continuous casting plants, Paper machinery | -30 | +180 | +120 | Poly-carbamide | Synthetic oil | 2 | 400 | + | ++ | - | ++ | • | + | • | • |
| | TEMP200 | Ball and roller bearings in guide rollers for baking machinery, Kiln trucks and chemical plants, Piston pins in compressors | -30 | +260 | +200 | PTFE | Alkoxyfluoro oil | 2 | 550 | + | ++ | --- | + | • | • | • | • |
| Special greases | SPEED2,6 | Ball bearings in machine tools, Spindle bearings, Rotary table bearings, Instrument bearings | -40 | +120 | +80 | Lithium complex soap | Synthetic oil | 2 – 3 | 25 | ++ | • | ++ | --- | - | • | • | • |
| | VIB3 | Ball and roller bearings in blade adjusters in wind turbine rotors, Packaging machinery, Rail vehicles | -30 | +150 | +90 | Lithium complex soap | Mineral oil | 3 | 170 | + | + | - | + | ++ | + | - | - |
| | FOOD2 | Ball and roller bearings in applications with food contact (NSF-H1 registration, kosher and halal certification) | -30 | +120 | +70 | Aluminum complex soap | Synthetic oil | 2 | 150 | + | - | • | • | • | • | • | ++ |
| | CLEAN-M | Ball, roller, and needle roller bearings as well as linear guidance systems in clean room applications | -30 | +180 | +90 | Poly-carbamide | Ether oil | 2 | 103 | ++ | ++ | • | • | • | • | • | + |
| | MOTION2 | Ball and roller bearings in oscillating operation, Slewing rings in wind turbines | -40 | +130 | +75 | Lithium soap | Synthetic oil | 2 | 50 | ++ | • | - | + | ++ | + | • | • |

¹⁾ Measurement values according to Schaeffler FE8 low temperature test.

++ extremely suitable | + highly suitable | • suitable | - less suitable | --- not suitable

Typical applications **Typical applications**

MISCIBILITY OF BASE OILS AND THICKENERS

Caution must always be taken when mixing different lubricants. On the one hand, lubricating oils and the base oils and thickeners used in greases may be incompatible (refer to tables 1 and 2). On the other hand, the effect of additives and the performance capability of lubricant mixtures cannot be estimated without the appropriate tests being carried out.

If technical conditions make it impossible to avoid lubricants becoming mixed, the risk that should be expected in terms of reduced performance and lubricant incompatibility can at least be estimated using the tables. In such cases, expert advice from lubricant experts is generally recommended – from the Lubricant Technology department at Schaeffler Technologies AG & Co. KG, for example.

| Base oil | Mineral oil | Polyalphaolefin | Esters | Polyglycol | Perfluoropolyether |
|--------------------|-------------|-----------------|--------|------------|--------------------|
| Mineral oil | + | + | ? | - | - |
| Polyalphaolefin | + | + | ? | - | - |
| Esters | ? | ? | + | ? | - |
| Polyglycol | - | - | ? | + | - |
| Perfluoropolyether | - | - | - | - | + |

▲ Table 1: Base oil miscibility*

| Thickener | Lithium soap | Lithium complex | Calcium complex | Lithium/calcium soap | Aluminum complex | Polycarbamide | PTFE |
|----------------------|--------------|-----------------|-----------------|----------------------|------------------|---------------|-------|
| Lithium soap | + | + | ? | + | - | ? | + |
| Lithium complex | + | + | + | + | ? | ? | + |
| Calcium complex | ? | + | + | + | ? | + | + |
| Lithium/calcium soap | + | + | + | + | - | + | n. s. |
| Aluminum complex | - | ? | ? | - | + | ? | + |
| Polycarbamide | ? | ? | + | + | ? | + | + |
| PTFE | + | + | + | n. s. | + | + | + |

▲ Table 2: Compatibility of different thickener types*

*Excerpts quoted according to the Society for Tribology (Gesellschaft für Tribologie e.V.), worksheet 9, "Lubricating systems", October 2015

| | | | |
|-----------------------------|-------------------------|---|---------------------|
| + Miscibility normally good | - Normally not miscible | ? Mixing often causes reduced performance capability; miscibility should be checked | n. s. not specified |
|-----------------------------|-------------------------|---|---------------------|

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