SCHAEFFLER

We pioneer motion

Arcanol Rolling Bearing Grease

Grease selection for typical applications

Arcanol Greases

	Grease	Characteristic applications	Operating temperature °C from	to	Continuous limit temperature °C	Thickener	Base oil	Consistency NLGI	Base oil viscosity at +40 °C mm²/s	Temperatures low	high	Low friction, high speed	High load, low speed	Vibrations	Sealing effect	Pumpability
Multipurpose greases	**MULTITOP**	Ball and roller bearings in rolling mills, Construction machinery, Spinning and grinding spindles, Automotive engineering, Rotary table bearings, Ball screw support bearing	–50[1)]	+140	+80	Lithium soap	Semi-synthetic oil	2	82	++	+	+	++	+	●	++
	MULTI2	Ball bearings up to 62 mm outside ø 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 ø 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, Rotary table 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	–20[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	Polyurea	Semi-synthetic oil	3	148	++	+	●	●	●	+	+
	TEMP110	Ball and roller bearings in clutches, Electric motors, Automotive engineering	–35	+160	+110	Lithium complex soap	Semi-synthetic oil	2	130	++	++	+	●	●	●	●
	TEMP120	Ball and roller bearings in continuous casting plants, Paper machinery	–30	+180	+120	Polyurea	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, Instrument bearings	–40	+120	+80	Lithium complex soap	PAO/Ester 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	Polyurea	Ether oil	2	100	++	++	●	●	●	●	+
	MOTION2	Ball and roller bearings in oscillating operation, Slewing rings in wind turbines	–40	+130	+75	Lithium soap	Synthetic oil	2	50	++	●	–	+	++	+	●
	SEMIFLUID	Semifluid grease lubricant for linear guidance systems and gears	–40	+160	+90	Lithium complex soap	Synthetic oil	00	180	++	+	●	––	●	––	++

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

++ extremely suitable + highly suitable ● suitable – less suitable –– not suitable

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	Polyglykol	Perfluorpolyether
Mineral oil	+	+	?	–	–
Polyalphaolefin	+	+	?	–	–
Esters	?	?	+	?	–
Polyglykol	–	–	?	+	–
Perfluorpolyether	–	–	–	–	+

Table 1: Base oil miscibility*

Thickener	Lithium soap	Lithium complex	Calcium complex	Lithium/ calcium soap	Aluminum complex	Polycarba-mide	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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