

Bearings are reliable-longlife machine elements. The most common reason of disfunction img src="images/stories/rudi/flag_bulgaria_sm.gif" title="in Bulgarian" mce_src="images/stories/rudi/flag_bulgaria_sm.gif" alt="in Bulgarian" align="right" border="1"> is the insufficient or unproper greasing of the ball bearings. The secure and proper flow of grease is extremely important for their, and other machine elements functionality.</td><td colspan="1"> </td><td colspan="1"> </td><td align="justify"><p>Greases are used where a mechanism can only be lubricated infrequently and where a lubricating oil would not stay in position. They also act as valuable sealants to prevent ingress of water and dust. Grease-lubricated bearings have greater frictional characteristics due to their high viscosity. Under shear, the viscosity drops to give the effect of an oil-lubricated bearing of approximately the same viscosity as the base oil used in the grease. Lithium-based greases are the most commonly used; sodium and lithium based greases have higher melting point (dropping point) than calcium-based greases but are not resistant to the action of water. Lithium-based grease has a dropping point at 190 °C to 220 °C (350 °F to 400 °F). However the maximum usable temperature for Lithium-based grease is 120 °C.</p><p>Grease used for axles are composed of a compound of fatty oils to which tar, graphite, or mica is added to increase the durability of the grease and give it a better surface.</p></td><td> </td><td> </td><td> </td></tr></table>Greases from FAG, Germany download as PDF file <table style="height: 208px;" border="1" width="503"><tr><td align="center"> Name</td><td align="center"> Operating Temperature °C </td><td align="center"> Technical specification </td><td align="center"> Thickener Base oil Base oil viscosity at 40 °C mm ² /s</td></tr><tr><td align="center">MULTI2 </td><td align="center">-30...+140 </td><td align="center">Universal greasefor ball bearings ?D ? 62 mm in small electric motors, agricultural and construction machines, household appliances </td><td align="center">Lithium soap Mineral oil 100 </td></tr><tr><td align="center">MULTI3</td><td align="center">-30...+140 </td><td align="center">Universal grease for ball bearings ?D > 62 mm in large electric motors, agricultural and construction machines,blowers </td><td align="center">Lithium soap Mineral oil 80 </td></tr><tr><td align="center">MULTITOP</td><td align="center">-40...+150 </td><td align="center"><p>Universal grease for ball and roller bearings in rolling mills, construction, machines, motor vehicles, spinning and grinding spindles at increased speeds, high loads, low and high temperatures </p></td><td align="center">Lithium soap with EP additives Mineral oil+ester 85 </td></tr><tr><td align="center">LOAD220</td><td align="center">-20...+140</td><td align="center"><p>Universal grease for ball and roller bearings in rolling mills, rail	
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vehicles at high loads, large speed range, high degree of humidity

Lithium/calcium soap with EP additives	Mineral oil	ISO VG 220	LOAD400	-25...+140	Special grease for ball and roller bearings in mining machines, construction machines at extreme loads, medium temperature medium speeds
Lithium/calcium soap with EP additives	Mineral oil	ISO VG 400	LOAD1000	-20...+140	Special grease for ball and roller bearings in mining machines, construction machines, preferably for shock loads and large bearings at extreme loads, medium temperatures, low speeds
Lithium/calcium soap with EP additives	Mineral oil	ISO VG 1000	TEMP90	-40...+160	Special grease for ball and roller bearings in couplings, electric motors, motor vehicles at high temperatures, high loads
Calcium/polyurea w/EP additive	PAO oil	ISO VG 130	TEMP110	-40...+160	Special grease for ball and roller bearings in electric machines, motor vehicles at high temperatures, high speeds
Lithium/complex soap	Ester oil	ISO VG 150	TEMP200	-40...+260	Special grease for ball and roller bearing in track rollers in baking machines, piston pins in compressors, kiln trucks, chem. plants at extremely high temp., chemically aggressive environments
PTFE/Fluor. poly. oil		ISO VG 400	SPEED2.6	-50...+120	Special grease for ball bearings in machine tools, instruments at extremely high speeds, low temperatures
Polyurea/PAO/ester oil	ISO VG 22		FOOD2	-30...+120	Special grease for ball and roller bearings in applications with food contact
Aluminium/complex soap	White oil	ISO VG 192			

Greases from Stealit, Bulgaria




Name	Operating Temperature	Thickener	Base oil	Base oil viscosity at 40 °C mm ² /s	Stock number and retail package
Litol 24	-25...+120	Universal grease for ball bearings. Recommended for normal loads, and general purpose.			110201-400g / 110202-800g / 110203-3kg / 110204-9.5kg
Calcium	-20...+60				
Recommended for low and normal loads, low speeds, regular anti friction grease for medium temperatures and loads					
calcium soap, Mineral oil	32 - 46				110205-400g / 110206-800g / 110207-3kg / 110208-9.5kg
Graphite	-20...+60				

> -20...+60 </td>	Recommended for low and normal loads, high and low speeds, for greasing overload details in normal temperatures. </td>
>calcium soap, Mineral oil, 46</td>	<td align="center"> 110209-400g 110210-800g 110211-3kg 110212-9.5kg </td></tr>
<td align="center"> Litel ♦2,♦3</td>	<td align="center"> -30...+130 </td><td align="center"> Recommended for normal loads, high speeds, for bearings and details working in high rotating speeds and heavy loads. </td><td align="center">Lithium soap, Mineral oil, 150</td><td align="center"> 110213-3kg ♦2 110214-9.5kg ♦2 110215-3kg ♦3 110216-9.5kg ♦3</td></tr>
<td align="center">Litel U-3</td><td align="center"> -30...+120 </td>	<td align="center"> Recommended for heavy loads and high speeds for all kind of bearings and hinges into the vehicle. </td><td align="center">Lithium soap, Mineral oil, 90</td><td align="center"> 110217-400g 110218-800g 110219-3kg 110220-9.5kg</td></tr>
<td align="center">Litel MS</td><td align="center"> -25...+120 </td>	<td align="center"> Recommended for normal and heavy loads, good for high speeds for bearings and joints for long-term use in heavy loads and usage. </td><td align="center">Lithium soap, Mineral oil with ♦♦♦♦with molybdenite disulfide, 130</td><td align="center">110221-300g </td></tr>
<td align="center">Litel U-00</td><td align="center"> -20...+120 </td>	<td align="center"> Recommended for normal and heavy loads, good for central greasing of heavy trucks. </td><td align="center">Lithium soap, Mineral oil, 220</td><td align="center">110222-3kg 110291-9.5kg </td></tr>