



GREASE CHARACTERISTICS AND APPLICATIONS

<u>Type Thickener</u>	<u>Grease Characteristics</u>	<u>Applications</u>
<u>A. Soap Thickened Greases</u>		
Aluminum	Smooth, gel-like appearance Low dropping point Good water resistance Softening/hardening tendencies greatly dependent on shear rate	Lubricate low-speed bearings Wet Applications Usage Decreasing
Sodium	Rough, fibrous appearance Moderately high dropping point Poor water resistance Good adhesive (cohesive) properties	Older industrial equipment where relubrication is frequent Rolling contact bearings
Calcium	Smooth, buttery appearance Low dropping points Good water resistance	Bearings in wet applications Railroad rail Lubricant
Lithium	Smooth, buttery to slightly stringy appearance High dropping point Resistant to softening and leakage Moderate water resistance	Automotive chassis and wheel bearings General industrial grease Thread lubricants for the oil drilling industry
<u>B. Complex Soap Thickened Greases</u>		
Aluminum Complex	Smooth, slight gel-like appearance Dropping points above 450F Good water resistance Resistant to softening Shorter life at high temp.	Steel mill roll neck, rolling, and plain bearings
Calcium Complex	Smooth, buttery appearance Dropping points above 450F Good water resistance Inherent EP/load-carrying capability	High-temperature industrial and automotive bearing applications
Lithium Complex	Smooth, buttery appearance Dropping points above 450F Resistant to softening and leakage Moderate water resistance	Automotive wheel bearing High-temperature industrial service including various roller-element applications
<u>C. NonSoap Thickened Greases</u>		
Polyurea	Smooth, sl. opaque appearance Dropping points above 450F Good water resistance Oxidation resistant Less resistant to softening and leakage	Industrial roller-element bearings Automotive constant velocity joints
Organo-clay	Smooth and buttery appearance Dropping points above 500F Resistant to leakage Good water resistance	High temperature bearings with frequent relubrication Steel mill roll neck Steel mill roll neck bearings