

**Mobil**<sup>™</sup>

Ask for colour.  
Ask for Mobil<sup>™</sup> grease.





# Be confident in colour

When your equipment is performing at its best, you can relax. Yet should it begin to overheat, require extra maintenance, or suffer excessive wear and tear, you need a grease that will get to work quickly and perform effectively in the toughest conditions.

From mining to construction, energy to automotive, steel to general manufacturing, Mobil™ grease is trusted across various commercial and industrial sectors. We can provide you with a tailored solution from our rainbow of advanced products.



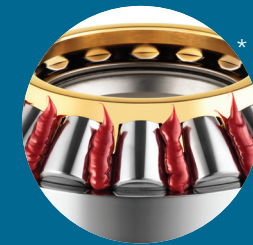
## Developed with you in mind

Created to meet the demands of your industry, our comprehensive range offers solutions for many different applications.



## Expert performance built over time

Over 150 years of industry expertise have shaped our products, resulting in extended oil drain intervals, higher protection, and increased productivity.



## Ready for any test

When your equipment is put through its paces, Mobil grease keeps it running in even the severest of environments.

\*Bearing courtesy of Timken

# A rainbow of applications

We work closely with world-leading OEMs developing Mobil products that deliver for their intended applications anywhere in the world. Our grease combines quality, consistency, and performance to give you peace of mind in your equipment.

With a wide range of Mobil greases, you'll find one that works for your application. And you can be confident you have the right product to maximise reliability, minimise maintenance costs and safety risks for your equipment.





# Colourful composition

Did you know grease is made up of oil, thickener, and additives? Each component plays an important role in how the grease works. Understanding what they all do is key to helping you make the right choice.

## Base oil

Forming 80-90% of a typical grease, base oil creates a lubricating film between metal surfaces, helping reduce friction and prevent wear. High-viscosity oil is thicker and works best in low-speed applications, while low-viscosity oil is thinner and better suited to high-speed applications.

## Thickener

Generally making up 10-15% of grease, thickener acts as a sponge that holds the grease together until the right conditions release the oil into action. Thickeners influence how the grease interacts with other lubricants and can also determine grease characteristics relating to water-resistance, high-temperature stability and more.

## Additives

Contributing to around 5-10% of a grease's formulation, additives play a pivotal role in enhancing performance beyond the characteristics of base oil and thickeners. These additives can offer a range of benefits, including wear protection, corrosion resistance, and effective control over oil bleed properties.



# Dive into the different thickener types

The performance of your grease is everything. While base oil and additives provide most of a grease's friction and wear properties, the choice of thickener is vital in influencing performance. Different thickeners bring different performance characteristics, including shear stability, water resistance, and bleed resistance

## The 3 main thickeners

There are three thickener types that are most commonly used by commercial businesses. Lithium Complex greases offer multipurpose properties and are the go-to solution in today's market. Calcium Sulfonate greases are growing in popularity as they provide shields that protect from water, rust, and corrosion, and are ideal in high-moisture and highly contaminated environments. Polyurea greases are known for high temperature/high-speed performance and are particularly suitable for electric motor bearings. Take a look at the table to the right to find out more about the thickener types and their properties.

Type	High Temperatures	Water Resistance	Mechanical Stability	Pumpability	Oxidation Stability
Lithium	-	+	+	○	○
Lithium Complex	+	+	+	+	+
Polyurea	++	+	○	+	++
Clay	++	○	-	○	+
Aluminum Complex	○	+	+	-	○
Sodium	-	-	-	-	-
Calcium Sulfonate	++	++	+	-	○
Calcium Complex	+	++	-	-	-



# Unbottling NLGI's role in grease

In the world of lubricating greases, the National Lubricating Grease Institute (NLGI) is essential in defining consistency standards across the industry. NLGI provides a detailed classification system where greases are assigned grades based on whether their appearance is semi-fluid, soft, or firm.

Higher NLGI numbers reveal a firmer consistency, while lower numbers represent a softer texture. The majority of Mobil greases fall between the 00 and 3 grades. You can explore the NLGI consistency spectrum to the right.

Remember that NLGI consistency and Oil viscosity are not the same. A firmer NLGI 3 grease with anti-leakage properties can use the same Oil viscosity as a semi-fluid NLGI 00 grease for centralized grease lubrication systems.

NLGI Grade	Appearance	NLGI Grade
000	Fluid	Cooking oil
00	Semi-fluid	Applesauce
0	Very soft	Brown mustard
1	Soft	Tomato paste
2	Normal grease	Peanut butter
3	Firm	Vegetable shortening
4	Very firm	Frozen yogurt
5	Hard	Smooth pate
6	Very hard	Cheddar cheese



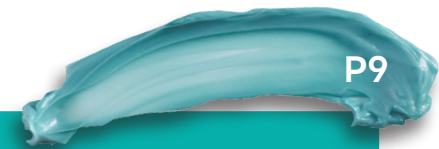
# Find a Mobil™ branded Industrial Grease for your every lubrication need.

	Thickener	Base Oil Viscosity @ 40°C mm <sup>2</sup> /s	NLGI	ExxonMobil Recommended Operating Temperature*		Specifications and Approvals	Typical Applications
				Min °C	Max °C		
	Polyurea	220	00	-30	170	NSF H1 Registered, Kosher (Parve) DIN 51826:2005-01 GPFHC00K-30 FDA 21 CFR 178.3570	Food processing, wide temperature range, long grease life for moderate loads, central distribution systems, manufactured in a facility registered to the requirements of ISO 21469.
	Polyurea	220	2	-30	170	NSF H1 Registered, Kosher (Parve) 222-DIN 51825:2004-06 KPFH-C2P-30 FDA 21 CFR 178.3570	Food processing, wide temperature range, long grease life for moderate loads, central distribution systems, manufactured in a facility registered to the requirements of ISO 21469.
	Polyurea	460	2	-20	170	NSF H1 Registered, Kosher (Parve) DIN 51825:2004-06 KPF2P-20 FDA 21 CFR 178.3570	Food processing, very high temperatures, long grease life for moderate loads, manufactured in a facility registered to the requirements of ISO 21469
	Polyurea	85	2	-30	180	DIN   51825: 2004-06 KHC2R-30	Long-life, extreme high-temperature lubrication of electric motor ball and roller bearings, particularly in sealed-for-life applications up to 180 C
	Lithium Complex	460	1.5	-30	150	DIN   51825: 2004-06 KPHC1-2N-30	Wind turbine pitch, main and yaw bearings.
	Lithium Complex	460	1.5	-50	120	DIN 51825: 2004-06 KP HC 1-2 M -50	Wind turbine yaw, pitch, and generator bearings - very low starting and running torque, excellent low temperature pumpability properties and enhanced wear protection
	Lithium Complex	680	1.5	-50	120	DIN   51825: 2004-06 KPHC1-2M-50	Wind turbine yaw, pitch, and generator bearings - very low starting and running torque, excellent low temperature pumpability properties and enhanced wear protection
	Lithium Complex	68	1.5	-50	140	DIN   51825: 2004-06 KPF-HC1-2N-50	Wind turbine individual pitch control (IPC) and yaw bearings - excellent low temperature pumpability properties and enhanced wear protection
	Lithium Complex	460	00	-30	120	DIN 51826:2005-01 GPHC00K-30 Cincinnati Machine P-81	Slow-speed gear boxes, poorly sealed gear cases. Nondriven wheel hubs.
	Lithium Complex	100	2	-40	150	DIN 51825:2004-06 KPHC2N-40 AAR-942, Cincinnati Machine P-73	High-speed bearings. Electric motors. Wind turbine generators.
	Lithium Complex	220	2	-30	150	DIN 51825:2004-06 KPHC2N-30	Multipurpose, wide temperature range.
	Lithium Complex	220	1	-40	150	AAR-942	Multipurpose, centralized grease systems. Wide temperature range. Rail applications (by approval).
	Lithium Complex	460	1.5	-40	150	DIN 51825:2004-06 KPHC1-2N-40	Heavy-duty applications experiencing slow speeds and heavy loads. Wide temperature ranges.
	Lithium Complex	1500	1.5	-30	150	DIN 51825:2004-06 KPHC1-2N-30	Extreme heavy-duty service for slow, highly loaded bearings. High temperatures.
	Lithium Complex	220, 460	1.5	-40	150	DIN 51825:2004-06 KPHC1-2N-40	Mobilith SHC PM greases are recommended for critical rolling element bearing applications in paper machines.
	Clay	32	1.5	-50	120	DIN 51825:2004-06 KPHC1-2K-50	High-speed spindle bearings, splines, screws, and machine tools operating in a wide temperature range.
	Clay	100	1.5	-50	180	N/A	High-speed bearings and thrust bearings operating in a wide temperature range. Electric motors (by approval).
	Clay	460	0.5	-40	180	N/A	High-speed spindle bearings, splines, screws, and machine tools operating in a wide temperature range.
	Lithium Complex	220	1	-20	140	Fives Cincinnati P-72 DIN 51825:2004-06 - KP 1 N -20	Multipurpose. Excellent water resistance. Automotive wheel bearings.
	Lithium Complex	220	2	-20	140	Fives Cincinnati P-64 DIN 51825:2004-06 - KP 2 N -20 NLGI HPM+WR	Multipurpose. Excellent water resistance. Automotive wheel bearings.
	Lithium Complex	220	3	-10	140	N/A	For severe applications where antileakage properties are needed.

Industry icon key	Manufacturing & Assembly	Construction & Mining	Electric Fan Bearing	Electric Motor Bearing	Heavy Commercial Vehicles	Steel & Aluminum	Paper & Pulp	Environmentally Aware	Open Gears
	Couplings	Cement	Wind	Spindle Bearing	Automotive	Food Machinery	Gears	Railroad	Mining Shovels



The list below is intended as a general guide only. Our experienced lubrication engineers can recommend the optimum use of all these products. Full details about these and any other Mobil-branded Industrial Greases are contained in Product and Material Safety Data Sheets, obtainable from your local sales office or distributor.



Icon	Product Name	Grease Image	Thickener	Base Oil Viscosity @ 40°C mm²/s	NLGI	ExxonMobil Recommended Operating Temperature*		Specifications and Approvals	Typical Applications
						Min °C	Max °C		
	Mobilgrease XHP™ 461, 462		Lithium Complex	460	1,2	-20	140	N/A	Multipurpose applications with heavier loads and slower speeds. Excellent water tolerance.
	Mobilgrease XHP™ 100 Mine		Lithium Complex	100	0	-30	140	N/A	Excellent mobility at very low temperatures, tacky and adhesive. Excellent water resistance. Equipment protection in high sliding mechanisms and heavy loads.
	Mobilgrease XHP™ 322 Mine		Lithium Complex	320	0,1,2	-20	140	N/A	Good mobility at very low temperatures, tacky and adhesive. Excellent water resistance. Equipment protection in high sliding mechanisms and heavy loads.
	Mobilgrease XHP 681 Mine		Lithium Complex	680	1	-10	140	Komatsu Mining	Slow-moving, heavily loaded bearings and bushings experiencing high loads and sliding mechanisms. Excellent water resistance.
	Mobilgear™ OGL 007		Lithium	460	00-0	-20	120	Bucyrus International SD4713, OGL	Heavily loaded slow to medium speed gearing.
	Mobilgear™ OGL 2800		Lithium	2800	0	0	100	N/A	Open gear application
	Mobilgear™ OGL 461		Lithium	460	1.5	-20	120	N/A	Heavily loaded slow to medium speed gearing.
	Mobilux™ EP 004		Lithium	150	00	-20	100	DIN 51826:2005-01 GP00G-20 SEW R32/302	Enclosed gears and bearings in poorly sealed gear cases.
	Mobilux™ EP 0		Lithium	150	0	-10	100	DIN 51826:2005-01 GP0G-10	General-purpose industrial grease.
	Mobilux™ EP 1, 2		Lithium	150	1,2	-20	120	1-DIN 51825:2004-06 KP1K-20 2-DIN 51825:2004-06 KP2K-20	General-purpose industrial grease.
	Mobilux™ EP 3		Lithium	150	3	-20	120	DIN 51825:2004-06 KP3K-20	General-purpose industrial grease.
	Mobil Polyrex™ EM		Polyurea	115	2	-20	160	DIN 51825:2004-06 K2P-20	High temperatures and speeds. Long life. Provides low-noise performance, light loads.
	Mobil Polyrex™ EM 103		Polyurea	115	3	-10	160	N/A	High temperatures and speeds. Long life. For applications where antileak performance is needed such as vertically mounted motors.
	Mobilgrease™ FM 101, 222		Aluminium Complex	222-220	2	-20	120	DIN 51825:2004-06 KPF1/2K-20 Cincinnati Machine P-72/P-64	Multipurpose NSF H1 Grease, good resistance to water wash, good low temperature mobility
	Mobilgrease™ XTC		Lithium	680	1	-30	120	AGMA CG-1, AGMA CG-2	AGMA CG1/CG2 high-speed, flexible couplings.
	Unirex™ N2		Lithium Complex	113	2	-20	140	DIN   51825: 2004-06 K2N-20L ISO 6743-9: 2003 L-XBDHA 2	High temperatures and speeds.
	Unirex™ N3		Lithium Complex	113	3	-20	140	DIN   51825: 2004-06 K3N-20L	High temperatures and speeds.
	Unirex™ EP 2		Lithium Complex	220	2	-15	140	N/A	Applications with severe water contamination, in vehicle wheel bearings, non-critical centralized systems, as well as grid-type flexible couplings.
	Mobil Centaur™ XHP 221		Calcium Sulfonate	220	1.5	-20	140	KP1-2G-20	Heavily loaded and water saturated applications in the steel and paper mill environments, excellent high temperature oil bleed control and extreme-pressure protection
	Mobil Centaur™ XHP 461		Calcium Sulfonate	460	1.5	-20	140	DIN 51825:2004-06 - KPF 1 K-20	Heavily loaded and water saturated applications in the steel and paper mill environments, excellent high temperature oil bleed control and extreme-pressure protection
	Mobil Centaur™ XHP 462		Calcium Sulfonate	460	2	-20	140	N/A	Heavily loaded and water saturated applications in the steel and paper mill environments, excellent high temperature oil bleed control and extreme-pressure protection
	Mobil Polyrex™ 461 EP		Polyurea	460	1	-20	160	DIN   51825: 2004-06 KPF1P-20	Medium to slow speed moving plain or roller bearings exposed to high temperatures, severe load and shock loading - excellent pumpability in central grease systems.
	Mobil Ininitec™ 152		Lithium Complex	120	1.5	-30	150	N/A	Long-life, high-temperature performance for automotive wheel bearing and chassis application

\* Recommended operating temperature range based upon lab rig testing and field experience.

For more information on Mobil Greases and other Mobil Lubricants, call your local sales representative or contact the Mobil Technical Helpdesk on [TechDeskEurope@exxonmobil.com](mailto:TechDeskEurope@exxonmobil.com) or visit [mobil.eu](http://mobil.eu) and use our live chat tool.



# Vibrant performance for your equipment

Productivity and performance underpin all Mobil™ grease products. Industry leading businesses have transformed how equipment works through utilizing the right Mobil™ grease for different applications.

Available in a range of NLGI consistency and viscosity grades, our high-technology greases can help provide you with noticeable benefits for your equipment:

Cost effective solutions to lubrication

Enhanced equipment reliability and performance

Boosted productivity and efficiency

**Savings of up to \$189,300 per year with Mobilith SHC™ 100 synthetic grease\***

A transportation truck fleet achieved an average lifetime of 370,000km for wheel bearings with Mobilith SHC™ 100 synthetic grease, providing a sharp increase in productivity and maintenance savings.

**Annual saving of up to 50,000 EUR with Mobil SHC Polyrex™ 462 synthetic grease\***

Changing to Mobil SHC Polyrex™ 462 synthetic grease improved one food company's bearing life to at least 1,000 hours (over 41 days' worth of operating hours), reducing maintenance work and production time and resulting in significant annual savings.

**Reduce grease consumption by 40% with Mobil Centaur XHP 461\***

After switching to Mobil Centaur XHP 461, a steel mill eliminated bearing failures, reduced grease consumption by 40%, and experienced minimal grease leakage around the casting machine.

\*This proof of performance is based on the experience of a single customer. Actual results can vary depending upon the type of equipment used and its maintenance, operating conditions and environment, and any prior lubricant used.



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Mobil™



# Expertise engineered

True innovation takes time and careful consideration. For more than 100 years, Mobil has expertly formulated and developed advanced greases that are engineered smart right from the start to help increase company productivity in commercial and industrial sectors worldwide.

Switch to Mobil™ greases and discover a range of great benefits.  
Visit [mobil.eu/grease](https://mobil.eu/grease)



Chat directly with our team of engineers\*  
who can aid you in selecting the right  
grease for your equipment.

Mobil.eu

email: [techdeskeurope@exxonmobil.com](mailto:techdeskeurope@exxonmobil.com)





# Using and caring for Mobil grease products

Greases are the lifeblood of your equipment, and correctly caring and using different greases will help improve the equipment's performance.

## How should greases be stored?

Mobil greases should be stored in their original sealed containers at ambient temperatures in sheltered locations. When stored properly in their original sealed containers, Mobil-branded greases have a recommended shelf life of five years.

## What is static bleed?

If you open a grease container and see a puddle of oil on top, you might not know what this is or if the grease can still be used. This puddle of oil is known as static bleed. Static bleed can be caused by storage conditions, such as temperature, length of storage, or vibrations exposed to containers. If there is just a small pool of static bleed, the grease should still be usable.

## Can different greases be mixed?

Mixing different types of greases can sometimes lead to incompatibility problems through hardening or softening the grease mixture. This can lead to equipment failure or damage to the lubricated components. To avoid this, thoroughly flush out the previous grease before applying a new type of grease.

Discover answers to your other grease-related questions:

[Mobil.eu/grease](https://www.mobil.eu/grease)



# Advancing Productivity™

All our Mobil greases work together with our service programs to create what we call Advancing Productivity. This combines critical safety, environmental care, and productivity benefits to help your business perform at its best for longer.



## Safety

Reduce your maintenance and the associated risks of employee equipment interaction through longer grease and equipment life and better wear protection.



## Environmental Care

Meet your sustainability goals and improve your business' effect on the environment by reducing grease leakage and oily waste generated through maintenance.



## Productivity

Boost the efficiency and productivity of your operation while reducing costly repairs and replacements through Mobil greases, which are designed to help protect equipment and provide trouble-free performance.

