

The American Society for the Testing of Materials (ASTM) has established standards for the testing of lubricating greases. This table has taken the typical range of test results reported by the lubricant companies for each test and ranked them into a good, better, best order.

Grease	Test	Good	Better	Best	Timken
Timken Premium All Purpose Industrial Grease	Four Ball Wear, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.6, 0.7	0.4, 0.5	0.6
	Four Ball Weld, ASTM D2596, kg	250	285	>315	285
	Timken OK Load, ASTM D2509, lbs	40, 45	50, 55	>60	55
Timken Ball Bearing Electric Motor Grease	Economical Ball Bearing Grease				
Timken Construction and Off-Highway Grease	Wheel Bearing Leakage, ASTM D1263, 300° F, g	8	5	<1.0	0.4
	Rust Prevention, ASTM D6138, 10% Seawater, Rating	1	0.5	0	0.1
	Four Ball Weld, ASTM D2596, kg	250	285	>315	620
	Four Ball Wear, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.6	0.45	0.45
	Timken OK Load ASTM D2509, lbs.	40, 45	50, 55	>60	65
	Operating Temperature Limit, ° F	300	350	400	400
Timken Ball Bearing Pillow Block Grease	Wheel Bearing Life, ASTM D3336, hrs@350° F	250	500	>750	750
	Water Washout, ASTM D1264, 175° F, %	10	5	2	2
	Rust Prevention, ASTM D6138, 10% Seawater, Rating	1	0.5	0	0
Timken Mill Grease	Mobility, US Steel, 0° F, gms/sec	0.04	0.08	>0.12	0.12
	Rust Prevention, ASTM D6138, 10% Seawater, Rating	1	0.5	0	0
	Salt Fog, ASTM B117, hrs,	1,000	1,500	>2000	2,500
	Water Sprayoff, ASTM D4049, % loss	20	15	<10	9
	Water Washout, ASTM D1264, 175° F, % loss	10	5	2	2.75
	Timken OK Load, ASTM D2509, lbs	40, 45	50, 55	>60	60
Timken Food Safe Grease	Four Ball Wear, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.6, 0.7	0.4, 0.5	0.6
	Four Ball Weld, ASTM D2596, kg	250	285	>315	315
	Water Washout, ASTM D1264, 175° F, %	10	5	2	5
Timken Synthetic Industrial Grease	Four Ball Wear, ASTM D2266, 40 kg, 167° F, scar mm	0.8	0.6, 0.7	0.4, 0.5	0.6
	Four Ball Weld, ASTM D2596, kg	250	285	>315	285
	Timken OK Load, ASTM D2509, lbs	40, 45	50, 55	>60	55
Timken Ultra-High Speed Spindle Grease	Wheel Bearing Life, ASTM D3336, hrs@300° F	1500	1750	2000	2000+
	Pour Point, ASTM D97, ° F, Max.	-45	-55	-60	-65
Timken Multi-Use Lithium Grease	Economical Multi-Use Grease				

Timken Grease Interchange Guide

Timken Premium All Purpose Industrial Grease

Castrol 4020/220-2™
 Castrol 8060/220-2™
 Chevron Delo® EP 2
 Chevron RPM Automotive LC Grease EP-2™
 Citgo Lithoplex MP2™
 Citgo Premium Lithium EP 2™
 Conoco Super-STA® 2
 Exxon Ronex MP™
 Exxon Unirex EP 2™
 FAG LOAD220™
 Fuchs (Century) Uniwrl 2™
 Lubrication Engineers Almagard® 3752
 Lubriplate® 1552
 Mobilgrease® XHP 222
 Pennzoil® Pennlith® EP 712
 Pennzoil® Premium Lithium Complex 2
 Petro-Canada Multipurpose EP 2™
 Royal Purple® Ultra-Performance® 2
 Shell Albida® LC 2
 Shell Retinax® LC 2
 SKF LGWA2™
 SKF LGEP2™
 Texaco Starplex® 2
 Unical 76 Multiplex Red™

Timken Construction and Off-Highway Grease

Castrol Moly 860-2ES™
 Castrol Contractor Grease 2™
 Conoco Superlube M EP™
 D.A. Stuart Molyplex EP 2™
 Exxon Centaur Moly™
 Exxon Ronex Extra Duty Moly™
 Fuchs Moreplex 2™
 Lubriplate® 3000
 Mobilgrease® Moly 52
 Mystik® Tetrimoly® Extreme
 Pennzoil® Multipurpose EP 302
 Pennzoil® Premium Lithium Complex 2 with Moly
 Petro-Canada Precision Moly EP 2™
 Schaeffer Moly Ultra Supreme 238™
 Shell Retinax CMX 2™
 Texaco Starplex® Moly MPGM2
 Unical 76 Megaplex™

Timken Ball Bearing Pillow Block Grease

Citgo Polyurea MP2™
 Conoco Polyurea 2™
 Exxon Polyrex® EM
 Exxon Unirex N™
 Mobilgrease® AW2
 Shell Alvania RL3™
 SKF LGHP2™
 Unocal 76 Unolife Grease™

Timken Mill Grease

Castrol Moluballoy 777-2ES™
 Chem & Lube Black Magic™
 Chevron Ultiplex EP 2™
 Conoco HD Calcium™
 Conoco Milube™
 Exxon Ronex Extra Duty 2™
 FAG Arcanol Load 400™
 Kyodo Yushi Palmax RBG™
 Loctite ViperLube™
 Lubriplate® 1444
 Shell Retinax® Grease HD
 SKF LGHB2™

Timken Food Safe Grease

SKF LGFP2™
 FAG Arcanol FOOD2™
 Keystone Nevastane HT/AW2™
 LE 4025 H1 Quinplex™
 LPS ThermaPlex Foodlube™
 Lubriplate® FGL-2
 Mobilgrease® FM 102
 Petro-Canada Purity FG™
 Royal Purple® Ultra-Performance® Clear FDA Grease

Timken Synthetic Industrial Grease

Mobilith SHC™ 460
 Chevron Ultiplex Synthetic Grease EP™
 Conoco SynCon Extra Long Life™
 Mobil SHC® PM
 Shell Albida® 460
 Texaco Starfak® PM

Timken Ultra-High Speed Spindle Grease

Kluberspeed BF 72-22™
 FAG Arcanol L-75™
 FAG Arcanol Speed 2,6™
 LubCon Highspeed L252™
 SKF LGCT2™

Timken Multi-Use Lithium Grease

Castrol Longtime PD™
 FAG Arcanol MULTI2™
 Lubriplate® 1200-2
 Lubriplate® 1241, 1242
 Lubriplate® 630-AA
 Mystik® Power Red Lithium C
 SKF LGMT2™

Timken Ball Bearing Electric Motor Grease

Conoco Polyurea 2™
 Chevron SRI™
 Citgo Polyurea 2™
 Lubriplate® EM
 Petro-Canada EMB™
 Shell Dolium® BRB



WARNING

Proper maintenance and handling practices are critical. Failure to follow installation instructions and to maintain proper lubrication can result in equipment failure, creating a risk of serious bodily harm.

TIMKEN

WORLDWIDE LEADER IN BEARINGS AND STEEL

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 Printed in USA
 15M 08-04-07 Order No. 7557

TIMKEN



- **TIMKEN PREMIUM ALL PURPOSE INDUSTRIAL GREASE**
- **TIMKEN BALL BEARING ELECTRIC MOTOR GREASE**
- **TIMKEN CONSTRUCTION AND OFF-HIGHWAY GREASE**
- **TIMKEN BALL BEARING PILLOW BLOCK GREASE**
- **TIMKEN MILL GREASE**
- **TIMKEN ULTRA-HIGH SPEED SPINDLE GREASE**
- **TIMKEN FOOD SAFE GREASE**
- **TIMKEN SYNTHETIC INDUSTRIAL GREASE**
- **TIMKEN MULTI-USE LITHIUM GREASE**

Timken Lubricants

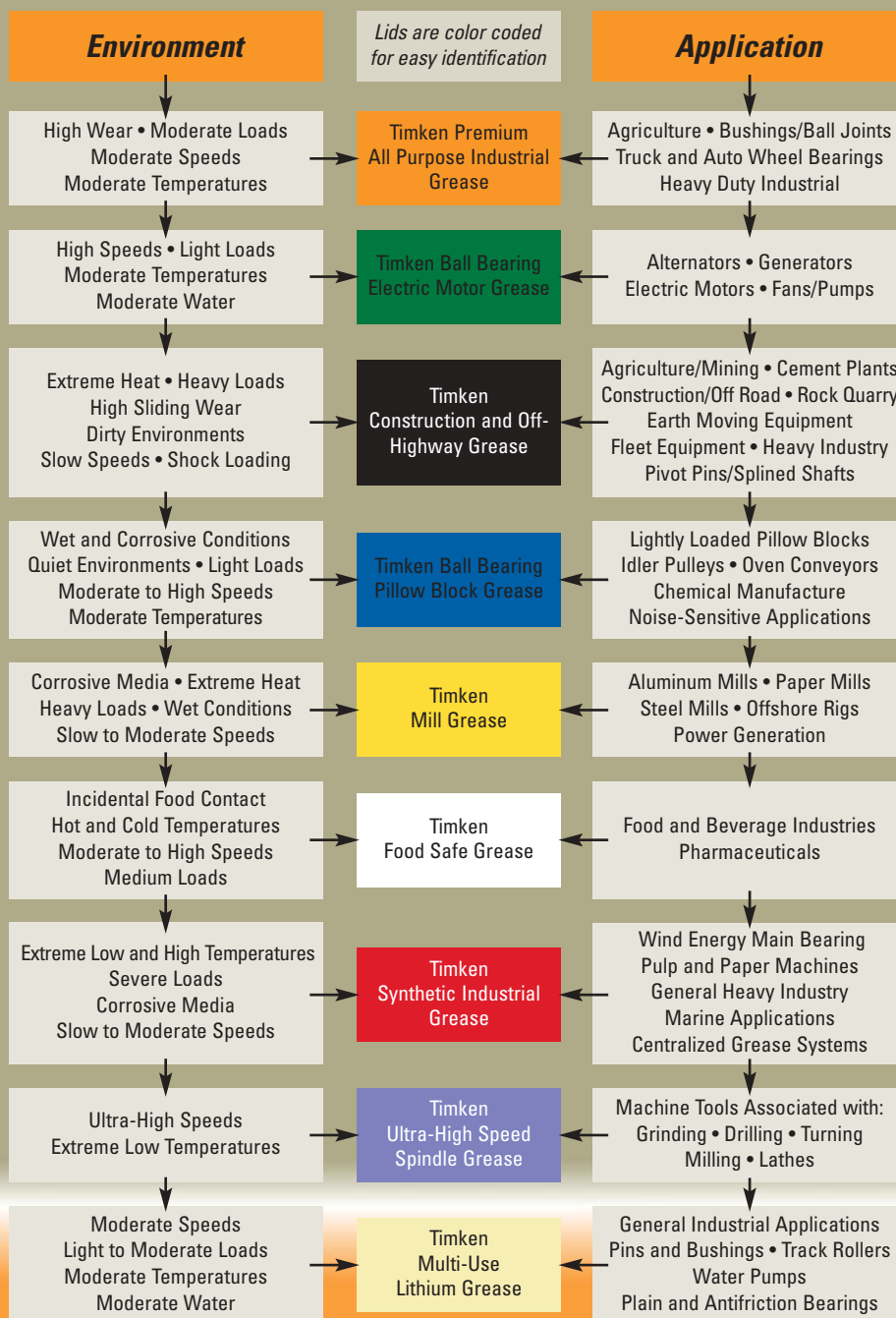
*Friction management solutions
to keep systems running smoothly*

THE TIMKEN COMPANY

Helping customers enhance system performance

The Timken Company, a global leader in bearing and steel technology, understands the importance of friction management. The Timken line of application- and environment-specific lubricants have been developed by leveraging our knowledge of tribology and anti-friction bearings and how these two elements affect overall system performance. Timken lubricants help bearings and related components operate effectively in demanding industrial operations. High-temperature, anti-wear and water-resistant additives offer superior protection in challenging environments.

Similar to our bearings, all Timken lubrication products are backed by highly trained customer service and technical support. Industrial customers turn to Timken for comprehensive friction management solutions, which extend beyond bearings to include delivery systems, lubrication, condition monitoring systems, training and bearing repair services. We help customers analyze performance and recommend options that make sense for their unique operating conditions and maintenance intervals.

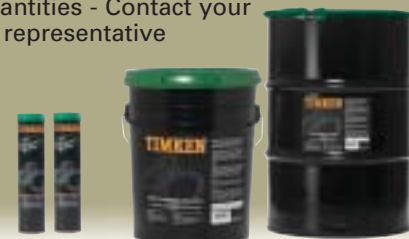


Timken Premium All Purpose Industrial Grease

- NLGI No. 2 extreme pressure grease
- Solid protection against rust and corrosion
- Excellent protection against wear
- Operating temperature range of -40° F to 300° F (-40° C to 149° C)
- Applications: Ideal for industrial bearings operating at higher-than-average temperatures and/or subjected to shock loading, as well as heavy-duty on- and off-road applications, wheel bearings, axles, ball joints, U joints, power takeoffs, king pins, bushings, trucks, buses and automobiles
- Available in:
 - 14-oz. cartridges, 10/case - Part #GR217C
 - One-pound tubs, 6/case - Part #GR217T
 - 35-pound pails - Part #GR217P
 - 120-pound kegs - Part #GR217K
 - 400-pound drums - Part #GR217D
 - Blister packs, 6 tubs/case - Part #GR217S
 - Bulk quantities - Contact your Timken representative

Timken Ball Bearing Electric Motor Grease

- NLGI No. 2 polyurea-thickened grease
- Protects against rust and corrosion and maintains excellent oxidation stability
- Operating temperature range of -40° F to 325° F (-40° C to 163° C)
- Applications: Ball bearings operating at mid- to high-speeds (10,000 RPM maximum), pumps, fans, electric motor bearings and idler pulleys
- Available in:
 - 14-oz. cartridges, 10/case - Part #GR218C
 - 35-pound pails - Part #GR218P
 - 120-pound kegs - Part #GR218K
 - 400-pound drums - Part #GR218D
 - Bulk quantities - Contact your Timken representative



This selection guide is not intended to replace specific recommendations by the equipment builder who is responsible for its performance.



Timken Construction and Off-Highway Grease

- NLGI No. 2 grease
- Provides resistance to extreme pressures caused by shock loading
- Protects against rust and corrosion
- Offers excellent high-temperature properties
- Operating temperatures of -40° F to 400° F (-40° C to 204° C)
- Applications: High-load, low-speed applications such as mining, draglines, construction equipment, agriculture machinery, bulldozers, scrapers, earthmovers, cranes, backhoes, shovels, rollers, tractors, combines and cotton pickers
- Available in:
 - 14-oz. cartridges, 10/case - Part #GR219C
 - 35-pound pails - Part #GR219P
 - 120-pound kegs - Part #GR219K
 - 400-pound drums - Part #GR219D
 - Bulk quantities - Contact your Timken representative



Timken Ball Bearing Pillow Block Grease

- NLGI No. 2 polyurea-thickened grease
- Outstanding long-life, moderately high-temperature lubrication of ball bearings
- Maintains mechanical shear stability
- Provides corrosion resistance, even in the presence of salt water
- Features low-noise characteristics and excellent pumpability
- Does not contain extreme-pressure additives but is inhibited against rust and oxidation
- Operating temperatures from -40° F to 325° F (-40° C to 163° C)
- Applications: Lightly loaded ball bearings in pillow blocks and conveyors that operate in high-temperature environments, including kiln and glasswork applications, electric motors, chemical manufacturing and noise-sensitive environments
- Available in:
 - 14-oz. cartridges, 10/case - Part #GR220C
 - 35-pound pails - Part #GR220P
 - 120-pound kegs - Part #GR220K
 - 400-pound drums - Part #GR220D
 - Bulk quantities - Contact your Timken representative

Timken Mill Grease

- Unsurpassed resistance to water washout
- Superior protection against rust and corrosion, including salt spray
- Excellent high-temperature properties
- TMG is formulated with high VI paraffinic mineral oil, resulting in better oxidation stability than Black Magic™ formulated with low VI naphthenic base oil
- Operating temperatures from -40° F to 400° F (-40° C to 204° C)
- Applications: Steel mills, paper mills, aluminum mills, foundries, cement plants, power generation, off-road applications, mineral processing, offshore rigs and marine applications
- This grease is available in three NLGI grades:
 - Part #GR180-NLGI No. 1
 - Part #GR181-NLGI No. 1.5
 - Part #GR182-NLGI No. 2
- Available in:
 - 35-pound pails - Part #GR182P
 - 120-pound kegs - Part #GR182K
 - 400-pound drums - Part #GR182D
 - Bulk quantities - Contact your Timken representative



Timken Food Safe Grease

- NLGI No. 2 aluminum-complex thickened lubricating grease
- Provides for improved low- and high-temperature performance
- Contains extra-pressure, anti-wear additives and corrosion and oxidation inhibitors
- Operating temperatures from -40° F to 300° F (-4° C to 149° C)
- Applications: Food processing operations
- Available in:
 - 14-oz. cartridges - Part #GR231C
 - 35-pound pails - Part #GR231P
 - 120-pound kegs - Part #GR231K
 - 400-pound drums - Part #GR231D
 - Bulk quantities - Contact your Timken representative



Timken Synthetic Industrial Grease

- NLGI No. 1.5 multi-purpose, lithium-complex lubricating grease
- Contains extreme-pressure and anti-wear additives
- Inhibits corrosion
- Operating temperatures from -50° F to 365° F (-46° C to 180° C)
- Applications: Used in a variety of industrial, construction, agriculture and automotive applications
- Available in:
 - 14-oz. cartridges - Part #GR232C
 - 35-pound pails - Part #GR232P
 - 120-pound kegs - Part #GR232K
 - 400-pound drums - Part #GR232D



Timken Ultra-High Speed Spindle Grease

- NLGI No. 2 polyurea-thickened grease
- Inhibits rust and oxidation
- Operating temperatures from -65° F to 300° F (-54° C to 149° C)
- Specifically designed for ball bearings
- Applications: Alternators, generators, starters, electric motors, drills, grinders, lathes, milling machines and other long-life applications
- Available in:
 - 14-oz. cartridges - Part #GR233C
 - 35-pound pails - Part #GR233P
 - Syringe - Part #GR233SYR



Timken Multi-Use Lithium Grease

- Fortified with rust and oxidation inhibitors
- Used in a variety of applications where extreme pressure is not required
- This grease is available in two NLGI grades:
 - Part #GR236-NLGI No. 1
 - Part #GR237-NLGI No. 2
- Available in:
 - 14-oz. cartridge - Part #GR236C
 - One-pound tubs, 6/case - Part #GR236T
 - 35-pound pails - Part #GR236P
 - 120-pound kegs - Part #GR236K
 - 400-pound drums - Part #GR236D
 - Bulk quantities - Contact your Timken Representative



A single source, many lubrication options

The 10 primary lines of Timken lubricants compliment our G-Power and M-Power single-point lubricators and our global offering of lubrication products. G-Power and M-Power units consistently distribute grease or oil into machine operations. These canisters can be filled with Timken lubricants or more than 200 types of commercial lubricants and mounted into place with a full line of Timken accessories.

Around the world, customers use Timken lubricants for rail bearings, rolling mills, power generation equipment, construction and transportation vehicles, and other industrial applications. With more than a century of leadership in developing friction management solutions, Timken is a trusted source for a broad range of bearings – and products that help keep all bearings and related components running smoothly.



For more information on Timken grease, contact your authorized Timken distributor or sales representative or visit www.timken.com/lubrication.