

M7002

High Performance Grease



M7002 High Performance Grease is a multi-service lubricant engineered for extreme conditions including high pressure, elevated temperatures, water exposure, and high load environments. Its calcium sulfonate thickener provides exceptional load-carrying capacity, acid neutralization, and a continuous operating rating of 400°F – available in grades EP 1, EP 2, EP 0.

CALCIUM SULFONATE THICKENER TECHNOLOGY

M7002 uses an advanced over based complex calcium sulfonate gelling chemistry that delivers exceptional EP characteristics without the addition of other additives. This state-of-the-art gelling system also yields superior mechanical stability, an inherently high dropping point, reduced wear and excellent resistance to water and corrosion.

PRIMARY APPLICATIONS

M7002 is the choice for applications where conventional greases face extreme challenges:

- Extreme pressure environments found in steel, paper, mining, construction, glass, brick & ceramics industries
- Highly loaded equipment – earth moving, backhoes, shovels
- Bearings – low-speed high load, high-speed with moderate to high loads
- Operations with high water and chemical exposure

KEY BENEFITS

- Optimum operating temperature up to 475°F
- Dropping point greater than 580°F (300°C)
- Extreme load carrying performance
 - Timken OK load rating of 60 lbs.
 - Four Ball Weld Load ratings as high as 500 kg
- Does not deteriorate when water enters the grease body
- Clings tenaciously to metal, increasing the level of protection and reducing consumption
- Multiple grades for centralized and automatic systems
- Long service life reduces relubrication frequency

UNSURPASSED EP PERFORMANCE

M7002 maintains far superior heat and wear resistance vs. conventional lithium and aluminum complex greases. A dropping point of greater than 580° F (300° C) insures M7002 stays put where it's needed in common high heat applications such as steel mills, paper mills, asphalt plants and glass manufacturing.

EXCEPTIONAL LOAD-CARRYING PERFORMANCE

With a Timken OK load rating of 60 lbs. and Four Ball Weld Load ratings as high as 500 kg, M7002 provides the extra protection needed in high-load applications – construction, mining and heavy industry.

UNIQUE PROTECTION FOR BEARINGS

M7002's advanced complex calcium sulfonate gelling chemistry protects heavily loaded bearings with layers of microscopically thin, wafer-like calcite particles. These sacrificial layers shear away and are continuously replenished, protecting the surfaces from damaging metal to metal contact.

EXCELLENT WATER AND MOISTURE RESISTANCE

M7002 does not deteriorate or wash out when water – including treated process water – enters the grease body, making it preferred choice for paper machine rolls, outdoor cranes, marine equipment, and other applications exposed to fresh and salt water.

MULTIPLE GRADES FOR DIVERSE APPLICATIONS

Available in EP 1 (pumpable for central systems), and EP 2 (general-purpose high load), providing a matched solution for a wide range of equipment types and operating conditions.

LOW ENVIRONMENTAL IMPACT

M7002 provides exceptional extreme pressure properties without the need for zinc, phosphorous or sulfur EP additives. And it does not include any lead, antimony or barium, so it poses a very low risk to the environment.

Typical Physical & Performance Characteristics

Property / Test Method	Grade	Grade
NLGI Grade	EP 1	EP 2
Thickener Type	Calcium Sulfonate	Calcium Sulfonate
Color	Blue	Blue
Texture	Smooth, Tacky	Smooth. Tacky
Cone Penetration, Worked 60 strokes @ 77°F, ASTM D-217	310-340	285-295
Dropping Point, °F (°C), ASTM D-2265	>586 (308)	>586 (308)
Kinematic Viscosity, cSt @ 40°C, ASTM D-445	219.2	219.2
Kinematic Viscosity, cSt @ 100°C, ASTM D-445	17.1	17.1
Timken OK Load, lbs., ASTM D-2509	60	60
Four Ball Wear Test, ASTM D-2596		
– Weld Point, kg,	400	500
– Load Wear Index	55.23	61.47
Four Ball Wear – Scar Width, mm, ASTM D-2266	0.50	0.43
Rust Test, ASTM D-1743	Pass	Pass
Copper Corrosion, ASTM D-130	1b	1b
Water Wash Out, % Retained, ASTM D-1264	98.15	98.18
Water Spray Off, % Retained, ASTM D-4049	90.30	95.49
US Steel Mobility, grams per min. 0°F, @ 32°F	5.14, 13.8	1.8, 3.24
Lincoln Ventmeter, psi @ 0°F, @ 30°F, @ 74°F	n/a, 787, 286	n/a, 1200, 485
Optimum Operating Temperature Range °F (°C)	0 to 475 (-18 to +246)	-10 to 475 (-23 to 246)

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