



LSG CALCIUM SULFONATE COMPLEX 220 GREASE NO. 2

Calcium Sulfonate Complex Grease for Heavy-Duty Applications in

Mining & Frack Operations

Unmatched Protection Against Wear, Corrosion, and Contamination in
Harsh Environments.

LSG CALCIUM SULFONATE COMPLEX 220 GREASE NO. 2

LONE STAR
GREASE & LUBRICANTS

Is a high-performance, over-based calcium sulfonate complex grease engineered for versatile, heavy-duty applications in the **mining and frack industry**. Built to endure harsh working environments, it offers unmatched lubrication, excellent high-temperature performance, and superior resistance to water washout, rust, and corrosion.

This grease is specially formulated without harmful environmental additives, aligning with environmentally responsible lubrication practices. It is ideal for haul trucks, excavators, shovels, draglines, crushers, drilling rigs, and hydraulic fracturing equipment, and any machinery where equipment is exposed to high loading, constant water, mud, abrasive rock dust, or process fluids.

LSG Calcium Sulfonate Complex 220 Grease No. 2 has been refined to deliver exceptional mechanical stability, thermal resilience, and load-bearing capability.

KEY FEATURES

- Calcium sulfonate complex thickener for superior EP and anti-wear performance, ideal for the extreme loads experienced in mining and frack operations.
- Exceptional water resistance — does not emulsify or wash out easily from constant water exposure (e.g., underground mining), high-pressure washdowns, or prolonged operation in mud and abrasive slurries.
- Excellent mechanical stability and high dropping point, maintaining integrity under the demanding mechanical and thermal stress of continuous mining and drilling work.

CUSTOMER BENEFITS

- ✓ Withstands extreme pressure and shock loading in demanding heavy-duty mining and drilling equipment.
- ✓ Delivers excellent adhesion to metal surfaces, reducing grease loss from vibration, impact, and harsh operating conditions typical of mine sites and drilling pads.
- ✓ Protects against rust and corrosion caused by moisture, abrasive slurries, and aggressive process fluids encountered in mining and frack environments.
- ✓ Reduces downtime by maintaining integrity under severe mechanical and thermal stress, crucial for maximizing productivity in 24/7 operations.
- ✓ Extends relubrication intervals, saving labor and material cost in remote and challenging environments.

Its proprietary formulation incorporates premium base oils, performance polymers, and a unique calcium sulfonate thickener system—creating a robust lubricant that adheres securely to metal surfaces, even under relentless vibration, extreme temperatures, or severe mechanical shear from continuous heavy-duty operations.

Unlike conventional greases, this grease performs reliably at elevated temperatures and does not soften excessively, preventing loss of lubrication. Its water resistance is outstanding, making it the preferred choice in applications with frequent exposure to water (e.g., underground mining), high-pressure washdowns, or components often operating in abrasive slurries and standing water.

LSG Calcium Sulfonate Complex 220 Grease No. 2 ensures optimal protection and extended equipment life across a wide spectrum of operating conditions, delivering confidence in uptime and reduced maintenance costs for critical 24/7 operations.

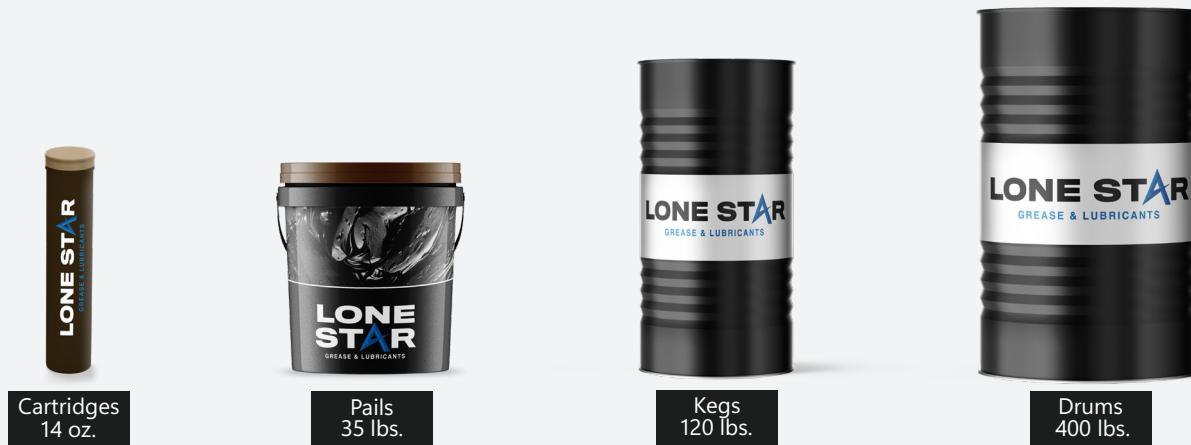
- Rust and corrosion inhibited for long service in wet or corrosive environments, protecting against acidic mine water, saline solutions, and other corrosive elements in drilling fluids.
- NLGI No. 2 consistency ideal for general purpose and severe-duty use across heavy mining and frack machinery.

APPLICATIONS

LSG Calcium Sulfonate Complex 220 Grease No. 2 is suitable for a wide variety of mining

- **Haul Trucks:** Wheel bearings, kingpins, and chassis lubrication.
- **Excavators, Electric Rope Shovels, and Draglines:** Bucket pins and bushings, boom pivot points, slew rings, walking mechanisms, and other heavily loaded articulation points.
- **Crushers and Mills:** Main bearings, drive gears (if grease lubricated), and support bearings.
- **Conveyor Systems:** Idler bearings, head and tail pulleys, and drive components exposed to dust and moisture.
- **Drilling Rigs:** Drawworks, rotary tables, mud pumps, blowers, and other heavily loaded components.
- **Hydraulic Fracturing Equipment:** Pumps, blending units, and other components requiring robust lubrication under high pressure and contamination.
- **Underground Mining Equipment:** Continuous miners, shuttle cars, roof bolters, and other machinery operating in wet and abrasive conditions.
- Any heavy-duty application in **mining and frack operations** where equipment is exposed to severe water washout, corrosion, abrasive dust, and extreme mechanical loading.

PACKAGING:



*Custom and Bulk Packaging available upon request.

TYPICAL PROPERTIES

Property	Value	Test Method
NLGI Grade	2	ASTM D217
Worked Penetration (60X)	265–295	ASTM D217
Dropping Point (°C)	>260	ASTM D2265
Base Oil Viscosity @ 40°C (cSt)	220	ASTM D445
Four Ball Weld Load (kg)	500	ASTM D2596
Four Ball Wear (mm)	0.40	ASTM D2266
Timken OK Load (lbs)	60	ASTM D2509
Water Washout, % @ 175°F	<1	ASTM D1264
Rust Test	Pass	ASTM D1743
Color	Amber	Visual
Texture	Smooth / Tacky	Visual
Copper Corrosion	1B	ASTM D4048



Typical properties reflect the expected results within normal production tolerances but do not constitute a specification. Minor variations that do not impact product performance may occur during standard manufacturing processes or at different blending locations. The information provided here is subject to change without notice.

Health and Safety:

When used as intended, this product is not expected to pose any health risks or safety concerns. To minimize exposure, avoid direct skin contact and wear resistant gloves when handling used lubricants. If contact occurs, wash the affected area immediately with soap and water. For comprehensive guidelines on safe handling and detailed product information, please refer to the Material Safety Data Sheet (MSDS) available on our website. <https://lonestargrl.com>