

# LSG SYNTHETIC LITHIUM COMPLEX 220 GREASE NO. 1 & 2

High Performance Synthetic Lithium Complex Grease for Extreme

Loads, High Temperatures & Water Presence in Steel Mills

Synthetic Grease for Uncompromising Performance in Demanding Mill  
Environments.

# LSG SYNTHETIC LITHIUM COMPLEX 220 GREASE NO. 1 & 2

**LONE STAR**  
GREASE & LUBRICANTS

is a full-synthetic PAO, lithium complex grease specifically formulated for the most challenging high-load, high-temperature, and high-moisture environments typical of steel mills. Featuring a synthetic base oil, this grease ensures robust lubricant film strength, exceptional thermal stability, and enhanced resistance to water, steam, and abrasive contaminants.

The availability of NLGI #1 and #2 consistency provides excellent mechanical stability and versatility, making it an ideal choice for lubrication systems on large machinery where superior adhesion, load-carrying capacity, and corrosion resistance are critical.

## KEY FEATURES

- **Full synthetic base oil** provides for robust film strength, excellent load-carrying capacity, and broad temperature performance.
- **Lithium complex thickener** for high dropping point and superior thermal stability, maintaining consistency in extreme heat.
- **NLGI #1 and #2 consistency** for versatile application, ensuring pumpability in centralized systems and structural durability in heavy-duty bearings.
- **Outstanding resistance to water, steam, and coolant washout**, providing critical protection against common mill contaminants.
- Exceptional anti-wear and **extreme pressure (EP) properties**, safeguarding components under severe loads and shock.
- Suitable for **extended re-lubrication intervals** under severe conditions, reducing maintenance frequency and operational costs.

## CUSTOMER BENEFITS

- ✓ Provides long-lasting protection in extreme heat, high humidity, and water-present environments, safeguarding valuable steel mill equipment.
- ✓ Reduces gear and bearing wear and friction in enclosed systems and open components, enhancing efficiency and component lifespan.
- ✓ Extends bearing and component life under heavy loads and continuous operation, minimizing costly repairs and unplanned downtime.
- ✓ Delivers consistent performance across broad temperature ranges, from ambient to high operating heat.
- ✓ Highly compatible with centralized and manual lube delivery systems, simplifying application and ensuring thorough lubrication.
- ✓ Resists contamination from scale, metallic dust, and other common steel mill debris.

Whether exposed to intense radiant heat, frequent water spray, heavy impact loads, or abrasive dust, **LSG Synthetic Lithium Complex 220 Greases** offer long-lasting protection and significantly reduces maintenance cycles in continuous operations.

This grease is meticulously designed to resist oxidation, water washout, steam degradation, and wear under extreme mechanical stress—making it an optimal choice for a wide range of demanding applications across hot rolling, cold rolling, continuous casting, and other critical areas within steel production facilities that require superior performance and extended lubricant life.

## APPLICATIONS

### LSG Synthetic Lithium Complex 220 Grease No. 1 & 2 is recommended for:

- Continuous Casters: Bearings, roller assemblies, and guides exposed to water and heat.
- Hot and Cold Rolling Mills: Mill stand bearings, roll neck bearings, screw-downs, pinch rolls, coilers.
- Blast Furnace Equipment: Bearings and mechanisms in areas exposed to high temperatures and dust.
- Overhead Cranes: Wheel bearings, hoist mechanisms, and trolley systems.
- Basic Oxygen Furnaces (BOF) / Electric Arc Furnaces (EAF): Trunnion bearings, tilt mechanisms.
- Annealing lines, pickling lines, galvanizing lines, and other finishing processes.
- Heavy-duty gear couplings, large industrial bearings, and general lubrication points in the steel mill.

# PACKAGING:



\*Custom and Bulk Packaging available upon request.

## TYPICAL PROPERTIES

Property	No. 1	No. 2	Test Method
NLGI Grade	1	2	ASTM D217
Worked Penetration (60X)	310–340	265–295	ASTM D217
Dropping Point (°C)	>260	>260	ASTM D2265
Base Oil Viscosity @ 40°C (cSt)	220	220	ASTM D445
Four Ball Weld Load (kg)	400	400	ASTM D2596
Four Ball Wear (mm)	0.45	0.45	ASTM D2266
Timken OK Load (lbs)	45	45	ASTM D2509
Water Washout, % @ 175°F	<2	<2	ASTM D1264
Rust Test	Pass	Pass	ASTM D1743
Color	Red	Red	Visual
Texture	Smooth / Tacky	Smooth / Tacky	Visual
Water Spray Off Test	<10%	<10%	ASTM D4049
Corrosion Protection	Pass (No Rust)	Pass (No Rust)	ASTM D665, Proc. B



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>