

LSA GREASE EXTREME MOLY5

THICKENER	NLGI	APPLICATION TEMP RANGE	BASE OIL VISCOSITY	TACKINESS ADDITIVE	EXTREME PRESSURE (4-BALL EP WELD LOAD)	WATER RESISTANCE ON A SCALE OF 3	SOLID LUBRICANTS (incl. MoS ₂)
CALCIUM SULPHONATE COMPLEX	1.5	-18° C to 180° C	460 cSt @ 40° C	YES	800KG	3	>5%

GREASE EXTREME MOLY5 is the highest performance extreme duty grease engineered to protect mining and earth moving mobile and stationary plant, operating under the most extreme and hostile conditions around the globe.

Key to the performance of **GREASE EXTREME MOLY5** is the Calcium Sulphonate Complex thickener technology, which provides inherent Extreme Pressure properties not achievable with conventional Lithium Complex thickeners popularly used in the mining industry today. Additionally, the Calcium Sulphonate Complex thickener technology imparts superior resistance to water washout and corrosion protection (in particular salt water corrosion) compared to conventional grease chemistries, with up to 50% improvement over Lithium Complex thickeners.

GREASE EXTREME MOLY5 meets and exceeds Caterpillar's key grease requirements for all machines operating at maximum Load Factors, under extreme load conditions, frequent oscillations and subject to severe shock loading:

- Exceeds the guideline of 5% solid lubricants, which imparts added protection in conditions susceptible to severe impact i.e. slamming
- Exceeds the Extreme Pressure performance 4-Ball EP Weld Point requirement of 620kg (ASTM D2596)
- Water washout resistance/ roll stability, comfortably meets requirements of +/- 5% and conforms to the corrosion resistance requirements to ASTM B117.

APPLICATION

GREASE EXTREME MOLY5 is applied to provide wear resistance under extreme ambient conditions requiring high load carrying ability, resistance to galling and fretting corrosion as well as resistance to water washout and salt water corrosion.

GREASE EXTREME MOLY5 can be used with absolute confidence in heavily loaded pin joints, in slow/medium speed heavily loaded bearings and high impact (shock load) applications encountered in mobile plant such as track type tractors, backhoe loaders, excavators and off-highway trucks. The median particle size of the lubricating solids used in the grease formulation is ~3µm, rendering it suitable for use in off-highway wheel bearing applications, joints and other tight clearance moving components. The product is additionally suited to severe duty applications in industries such as drilling, steel & metal processing, paper, agriculture, marine etc.

GREASE EXTREME MOLY5 is formulated with a tackiness enhancer that allows the grease to adhere to vertical surfaces, or surfaces in motion where the grease resists "fling-off". Grease adhesion is a key requirement in applications such as swing gears in excavators; where the grease firstly needs to remain in place to avoid lack of lubrication, and secondly where the Extreme Pressure (EP) performance needs to be capable of protecting the heavily loaded gear teeth in order to extend component life.

GREASE EXTREME MOLY5 is available in an NLGI #1 consistency for applications in centralised lubrication systems where lower ambient temperatures (-10°C to 30°C) may impede grease pumpability.

KEY FEATURES & BENEFITS

PRODUCT TEST DATA

Calcium Sulphonate Complex Technology	Higher Drop Point	Suitable for higher temperature applications
	Improved Mechanical Stability	Grease does not slump (drip out) under oscillating loads
	Inherent EP properties in the chemistry of the soap base	Imparts lower wear through superior Extreme Pressure boundary lubrication
	Inherent water resistance (improved roll stability)	Prevents grease breakdown even under the presence of water, resists water wash-out
	Inherent corrosion resistance and resistance to acidic attack	Prevents rust and corrosion under water ingress conditions, resists salt water corrosion attack
	Additives	5% solids (MoS ₂)
Tackiness Enhancer		Forms adhesive grease film on vertical surfaces to ensure lubrication under all conditions

PROPERTY	TEST METHOD	GREASE EXTREME MOLY5		
		NLGI #1	NLGI #1.5	NLGI #2
NLGI Grade	ASTM D217	1	1.5	2
Colour	Visual	Grey/Black		
Thickener	-	Calcium Sulphonate		
Lubricating Solids, %	-	>5%	>5%	>5%
Base Oil Viscosity	ASTM D445	460 cSt at 40°C	460 cSt at 40°C	460 cSt at 40°C
		30.2 cSt at 100°C	30.2 cSt at 100°C	30.2 cSt at 100°C
Viscosity Index	ASTM D445	>94.0	>94.0	>94.0
Drop Point	ASTM D2265	>265°C	>265°C	>265°C
Worked Penetration	ASTM D217	320 mm	305 mm	285 mm
Change after 100k strokes		< +25 mm	< +23 mm	< +20 mm
% Oil Separation, at 25°C, 24h	ASTM D1742	0.70%	0.60%	0.50%
4-Ball EP Weld Load	ASTM D2783	800 kg	800 kg	800 kg
4-Ball Wear Scar Diam.	ASTM D2266	0.45 mm	0.45 mm	0.45 mm
Timken OK Load	ASTM D2509	30 kg	30 kg	30 kg
% Water Washout	ASTM D1264	1.6% loss	1.35% loss	1.1% loss
% Water Spray-off	ASTM D4049	<10%	<10%	<10%
Rust Test, rating	ASTM D1743	Pass	Pass	Pass

Package Sizes:

- Bulk System**
- 180kg Drums**
- 20kg Pails**
- 450g cartridges**