PRIMROSE PLUS

PRIMROSE SINCE 1916

Technical Data Sheet

555 Armor Plate with Moly-D

EP Open Gear Lubricant

DESCRIPTION:

Armor Plate with Moly-D EP Open Gear Lubricant is a metallic green adhesive grease which provides complete protection and lubrication for all exposed gears, cables, guide rails, flanges, fifth wheels, and virtually any type of equipment in any exposed environment or frictional load carrying capacity. Through the use of the highest quality components, ease of application, versatility, and long-lasting protective features are obtained, making Armor Plate the ultimate open gear lubricant.

COMPOSITION:

Armor Plate with Moly-D is a complete departure from the old form of open gear lubrication. Most compounds are asphaltic or tar-like residues and extremely messy. They either are extremely difficult to apply because heating is required, or they contain a high percentage of highly volatile solvent cut-back which is not only dangerous but is material paid for which merely evaporates, leaving a hardened material which is not really a lubricant.

Armor Plate with Moly-D EP Open Gear Lubricant is carefully compounded with an exclusive process utilizing a completely synthetic non-metallic thickener which is chemically treated to make it hydrophobic, or totally waterproof. This property is permanent and stable up to 930ºF. This thickener imparts superior mechanical stability to the grease because it gives the grease "structural viscosity" rather than a stratified lattice structure. This means other greases or chemical contaminants will not cause Armor Plate with Moly-D EP Open Gear Lubricant to break down.

The base fluid of Armor Plate with Moly-D EP Open Gear Lubricant is a highly viscous, shear-stable, high molecular weight polymer and a highly refined mineral oil for superior lubricating qualities and high film strength.

This base fluid and thickener is compounded with Moly-D, our special molybdenum compound for superior extreme-pressure protection and anti-wear qualities, as well as additional additives for exceptional rust and corrosion protection, oxidation inhibition, and tenacious adherence to metal surfaces.

PERFORMANCE CHARACTERISTICS:

The highest degree of extreme pressure protection is attained in Armor Plate. The use of chemical EP additives combined with Moly-D offers the ultimate in protection against wear for metal surfaces. A plating action is actually formed which is a practically impenetrable barrier against metal-to-metal contact.

Armor Plate with Moly-D with its superior adhesive properties also provides a perfect seal of protection against all elements in exposed applications. This grease is completely waterproof, even against salt water, and cannot be washed off. In addition, its powerful rust and corrosion inhibitors resist all types of chemical attack including acids and alkalies, and it resists the penetrating effect of solvents. More importantly, it is compatible with all other greases. A true hi-temp lubricant, it is non-melt and uses an extremely high viscosity index base fluid that thins out very little at temperatures compared to asphalts and conventional greases. It is a heavy grease, but it remains very pliable at low temperatures, unlike other products which completely harden. It will not pound out, sling off, or wash out, and its tremendous affinity for metal surfaces makes it highly adhesive, yet it is not so stringy that it pulls off or is difficult to work with.

USES:

Armor Plate with Moly-D EP Open Gear Lubricant is a heavy, viscous product for heavy, generally slow-moving or stationary applications where the metal is exposed to destructive elements or requires maximum extreme pressure protection. It is especially useful in special situations underwater or high temperature applications. Also, it will pass the EPA Toxicity Characteristics Leaching Procedure (TCLP) and is not subject to the stringent and costly disposal requirements for products that do not.

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APPLICATIONS:

- Jackup Grease (racks & pinions)
- Dragline Boom and Reduction Gears
- Dragline Walk Shoe Guides
- Dragline Sliding Shoe Wear Plate
- Dragline Walking Cam Bushings and Pivots
- Exposed Flanges, Cables, Chains, Gears
- Fifth Wheels
- Almond Shaker Pads
- Underwater Drilling Rig Cables
- Dam Floodgate Devises
- Dipper Sticks on Shovels
- Walking Beams and Jackposts on Drilling Rigs
- Elevator Cable Car and Counterweight Guide Rails
- Drilling Perforating Gun Holes (plug up to protect charges)
- Glass Machinery Lubrication Near Molten Glass
- Paper Mill Lubrication
- Kiln Bearings
- Steel Mill Lubrication (coke oven doors, cooling bed bearings)
- Power Shovels (rack and pinion, swing gear, and pinion and hoist gear of shovel)

TYPICAL SPECIFICATIONS:

NLGI Grade	No. 2
Penetration, ASTM D217	290
Mechanical Stability, % Consistency	
Loss After Working 10,000 Strokes	5% Max
Dropping Point, ASTM D566	Non-Melt
Texture	Smooth
Color	Green
Water Washout, ASTM D1264	<1%Water Washout
Oxidation Stability, ASTM D942	
psi loss @ 100 hrs	1
Hrs. for 25 psi loss	2500
Rust Prevention Test, ASTM D1743	Pass (No Rust)
Timken OK Load, ASTM D2509	65 lbs.
4-Ball Wear Test, mm, ASTM D2266	0.55
4-Ball Weld Load, kg, ASTM D2596	>800
Low Temperature Pumpability	
Performance (Special Grades):	-
Lincoln Ventmeter K95400 @ 20ºF (-7ºC)	
Lincoln Ventmeter K95400 @ 14º F (-10 ºC)	-
Copper Strip Corrosion, ASTM D4048	
24 Hrs. @ 100 ºC	1b
Base Fluid Characteristics:	
Viscosity, cSt @ 40 ºC, ASTM D445	2225
cSt @ 100 ºC, ASTM D445	360
SUS @ 100 ºF, ASTM D445	10310
SUS @ 210 ºF, ASTM D445	1679
Viscosity Index	170
Flash Point of Base Fluid(s), ASTM D92	
Minimum, ºF (ºC)	515 (268)
Flash Point of Base Product with Diluent	N/A(No Diluent)
Pour Point, ASTM D5950, ºF (ºC)	25(-4)

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