Molub-Alloy 860/460-2 ES

High-performance grease

Description

Castrol Molub-Alloy™ 860 ES greases are high-performance multi-service lithium greases formulated from premium petroleum base oils, lubricating solids and a combination of corrosion inhibitors specifically chosen for protection against corrosive process waters. These are designed to extend the service life of bearings in heavy-duty applications and at elevated temperatures. Molub-Alloy 860 ES greases provide an appropriate oil film for applications at slower to moderate speeds, higher loads, and/or higher temperatures sustained for longer periods of time.

The load-carrying and anti-wear capabilities of Molub-Alloy 860 ES greases exceeds conventional complex greases. High-performance is the result of chemical additives working synergistically with select Molub-Alloy lubricating solids which are dispersed uniformly throughout the grease. The lubricating solids offer their greatest benefit at slow speeds or when bearings endure heavy loads and shocks. Solids also protect newly machined bearing surfaces during the critical period of 'running in'. Good bearing surfaces are essential for long service life.

Application

Molub-Alloy 860/460 ES greases should be used when loads are heavy, temperatures are elevated (up to 204ºC/400ºF) and speeds are slow, such applications include anti-friction bearings, bushings, sheaves and couplings.

Primary industry, including steel - use Molub-Alloy 860 ES greases near hot ingots, soaking pits and reheat furnaces to lubricate pit cover carriages, mill stand screws, slipper couplings, roll bearings, manipulators and guide rolls for continuous casters.

Paper Industry - on paper machines, use Molub-Alloy 860 ES greases on the 'wet end' couch, suction, and press roll bearings where water wash, corrosive process waters and high temperatures are present.

Mining, construction, onshore drilling and offshore installations where heavily loaded slow speed applications subjected to shock loading in extreme environments.

Features and Benefits

- Excellent friction reduction characteristics due to Molub-Alloy solid lubricants - easier start-up, reduced heat and reduced energy leading to longer bearing life.
- Exceptional water resistance - coating film stays on the surface even in the presence of water, even when exposed to the action of hot and chemically active process water.
- Excellent EP and anti-wear properties - protects equipment against extreme/shock loading and helps minimise bearing component wear and hence extends equipment life.
- Excellent mechanical stability and adhesion - grease keeps its consistency in service ensuring long-term protection and reduced consumption as film stays between lubricated surfaces.
- Outstanding oxidation/thermal stability and high dropping point - provides reliable performance and extended lubricant life in high-temperature applications.
- Formulated to address environmental concerns - it is free of antimony, barium, lead and zinc.

Additional Information

- At temperatures above 121ºC/250ºF, regular reapplications of 860 ES must be considered.
- At temperatures near 177ºC/350ºF, weekly reapplications of 860 ES are suggested.
- For continuous service near 204ºC/400ºF, reapply 860 ES daily or once every shift.

Molub-Alloy 860 ES greases have been used above 232ºC/450ºF. However, frequent reapplication of grease is necessary to prevent deterioration of the petroleum base oil. Reapply before the grease in the bearing stiffens.

In order to minimise potential incompatibilities when converting to a new grease, all previous lubricant should be removed as much as possible prior to operation. During initial operation, relubrication intervals should be monitored closely to ensure all previous lubricant is purged.

Technical Data

Name	**Method**	**Units**	**Molub-Alloy 860/460-2 ES**
Appearance	Visual		Dark grey
Thickener			Lithium complex
Base Oil			Mineral oil
NLGI Grade			2
Density @ 20ºC	ASTM D1475	g/ml	0.896
Worked Penetration, 60 Strokes @ 25ºC	ISO 2137 / ASTM D217	1/10 mm	265 - 295
Dropping point	ISO 2176 / ASTM D2265	ºC	260+
Base Oil Viscosity @ 40ºC	ISO 3104 / ASTM D445	mm²/s	460
Base Oil Viscosity @ 100ºC	ISO 3104 / ASTM D445	mm²/s	28.5
Base Oil Flash Point	ISO 2592 / ASTM D92	ºC	232
Base Oil Pour Point	ISO 3016 / ASTM D97	ºC	-1.2
Rust Test, 48 hrs @ 52ºC	ASTM D1743	Rating	Pass
Corrosion Protection (SKF Emcor)	ISO 11007 / ASTM D6138	Rating	0/0
Copper Corrosion, 24 hrs, 100ºC	ISO 2160 / ASTM D4048	Rating	1b
Four Ball EP Test Load Wear Index	ASTM D2596	kg	60
Four Ball EP Weld Load	ASTM D2596	kg	500
Four Ball Wear Test (1 hr, 40 kg, 1200 rpm, 75ºC), Scar Diameter	ASTM D2266	mm	0.5
Timken EP Test, OK Load	ASTM D2509 / IP 326	kg/lbs	27/60
Roll Stability, 2 hrs, 25ºC, Penetration Change	ASTM D1831	% change	10

Name	Method	Units	Molub-Alloy 860/460-2 ES
Water Washout, 79ºC	ASTM D1264	% loss	4
DIN Classification	DIN 51502		KPF 2 N-20
ISO Classification	ISO 6743/9		L-XBDHB-2

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

Care and Handling

Avoid prolonged or repeated contact with skin. Wash thoroughly after handling.

Packaging and Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration of drum markings. Products should not be stored above 600C, exposed to hot sun or freezing conditions.

Australia Level 8 (QV1 Building), 250 St. Georges Terrace, Perth WA 6000, Australia. Customer Service Number +61 (0)8 9420 1854

Dubai City Tower 2, 6th Floor PO BOX 1699, Sheikh Zayed Road, Dubai, U.A.E. Customer Service Number +971 4 3079304

Norway Drammensveien 167, Box 153 Skoyen, 0212 Oslo, Norway. Customer Service Number +47 22 51 12 43

Singapore Keppel Bay Towers, 1 Harbourfront Avenue 02-01, Singapore 098632, Singapore. Customer Service Number +65 6371 8478

United Kingdom BlueSky Business Space, Westpoint House, Pavilion 2 Prospect Park, Prospect Road, Arnhall Business Park, Westhill. AB32 6FJ, UK. Customer Service Number +44 (0)1224 766900

USA 501 Westlake Park Boulevard, Houston, Texas 77079, USA. Customer Service Number +1 800 339-7157

www.castrol.com/offshore