SAPPHIRE® Extreme 2

High load, high temperature MoS_2 bearing grease

Product Overview

ROCOL® SAPPHIRE Extreme 2 is a heavy duty, high temperature bearing grease fortified with molybdenum disulphide. It has been designed for the effective lubrication and protection of ball, roller and plain bearings used in extreme environments.

SAPPHIRE Extreme 2 combines the resilience of a clay thickener with the addition of molybdenum disulphide ensuring that a lubricating film exists under the most extreme loadings where the grease film can be squeezed out.

Features and Benefits

- Excellent high temperature resistance – operating from -10°C to +235°C.
- Non-melting, organically modified clay (Bentone) thickened, grease, fortified with molybdenum disulphide, for excellent high temperature and water resistance.
- Molybdenum disulphide (MoS_2) has an affinity to metal surfaces leaving a tenacious high load carrying film with a low coefficient of friction. This film provides an extremely durable layer, reducing frictional heat and wear and extending component life and lubrication intervals.
- Ideal for highly loaded applications, where shock loads and vibration can occur.
- Highly resistant to oxidation, providing extended lubrication intervals over conventional lubricants.
- Excellent corrosion resistance to protect in humid, damp and even wet conditions.
- Highly tenacious lubricants, with outstanding film strength, ensure the lubricants remain in place even in severe operating conditions.
- SAPPHIRE Extreme 2 maintains its integrity in extreme conditions and continues to protect over extended lubrication intervals, reducing equipment failure, downtime and lubricant usage.

Directions for Storage and Use

- SAPPHIRE Extreme 2 can be applied manually, by grease gun, keg pump or by other methods suitable for dispensing NLGI No. 2 greases with solid additives.
- SAPPHIRE Extreme 2 is compatible with other clay thickened greases. However, for best results the previous lubricant should be removed prior to application.
- Avoid mixing SAPPHIRE Extreme 2 with soap thickened greases.
- The storage temperature should be controlled between +1°C and +40°C.
- Shelf life is 3 years from date of manufacture.

Typical Applications

SAPPHIRE Extreme 2 is particularly suitable for high temperature bearings operating in extreme conditions such as shock loads, vibration and wet environments.

It is designed for all types of ball, roller and plain bearings typically found in industries such as steelworks, quarries, mining, marine, docks, agriculture, construction, brick and tile works and other industries particularly where ovens or similar heavy duty, high temperature applications are found.

SAPPHIRE Extreme 2 excels in applications such as ovens, furnaces, kiln cars, crushers, screens, presses, loaders, scrapers, wagons and similar applications where bearings, pins, bushes, slides etc. are subjected to extreme conditions.

Pack Sizes

Pack Size	Part Code
400g cartridge	12211
5kg	12216
18kg	12214
50kg	12218

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BS EN ISO 9001 Certificate No. FM 12448
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Technical Data

Performance you can trust

SAPPHIRE® Extreme 2

High load, high temperature MoS_2 bearing grease

Property	Test Method	Result
Appearance	Visual	Smooth blue / black grease
NLGI No.	IP 50 – ASTM D217	2
Base Type	N/A	Semi-synthetic
Base Fluid Viscosity at 40°C	IP 71	200cSt
Base Fluid Viscosity at 100°C	IP 71	20cSt
Thickener	N/A	Organically modified clay
Solids	N/A	Molybdenum disulphide
Temperature Range - Upper Limit	N/A	-10°C to + 235°C
Temperature Range - Short Periods	N/A	Up to +250°C
4-Ball Weld Load	IP 239 – ASTM D2596	280kg
4-Ball Mean Hertz Load	IP 239 – ASTM D2596	50kg
Oil Separation 24 hrs at +100°C	IP 121	5% maximum
Water Washout Test	IP 215 – ASTM D1264	0%
Emcor Corrosion Test	IP 220	0:0
Corrosion Test:		
24 hrs at +100°C Copper	IP 112 – ASTM D130	1a
Corrosion Test - Mild Steel	24 hrs at 100°C	No stain
Corrosion Test - Aluminium	24 hrs at 100°C	No stain

Values quoted above are typical and do not constitute a specification.

Safety Data Sheets

Safety data sheets are available for download from our website www.rocol.com or may be obtained from your usual ROCOL contact.

The information in this publication is based on our experience and reports from customers. There are many factors outside our control or knowledge which affect the use and performance of our products, for which reason it is given without responsibility.

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