Technical Data

Performance you can trust

SAPPHIRE® Hi-Pressure

High load molybdenum disulphide plain bearing grease

Product Overview

ROCOL® SAPPHIRE Hi-Pressure is a heavy duty bearing grease fortified with molybdenum disulphide. It has been designed for the effective lubrication and protection of plain bearings and sliding surfaces used in extreme environments, particularly in heavily loaded, slow moving applications.

SAPPHIRE Hi-Pressure 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

- Wide temperature range – operating from -20°C to +150°C.
- SAPPHIRE Hi-Pressure is a non-melting grease, fortified with molybdenum disulphide, for excellent 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.
- SAPPHIRE Hi-Pressure offers excellent corrosion resistance to protect in humid, damp and even wet conditions.
- SAPPHIRE Hi-Pressure maintains its integrity in arduous conditions and continues to protect over extended lubrication intervals, reducing equipment failure, downtime and lubricant usage.

Directions for Storage and Use

- SAPPHIRE Hi-Pressure can be applied manually, by grease gun, keg pump or by other methods suitable for dispensing NLGI No. 2 greases with solid additives.
- SAPPHIRE Hi-Pressure is compatible with other clay thickened greases. However, for best results the previous lubricant should be removed prior to application.
- Avoid mixing SAPPHIRE Hi-Pressure 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 Hi-Pressure is particularly suitable for heavily loaded, slow moving applications typically found in industries such as quarries, mining, marine, docks, agriculture, and construction.

SAPPHIRE Hi-Pressure excels in applications such as crushers, screens, presses, loaders, scrapers, wagons and similar applications where plain bearings, pins, bushes, slides etc. are subjected to extreme conditions.

Pack Sizes

Pack size	Part Code
400g cartridge	12011
500g	12013
5kg	12016
18kg	12024
50kg	12018

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Property	Test Method	Result
Appearance	Visual	Smooth blue / black grease
NLGI No.	IP 50 – ASTM D217	2
Base Type	N/A	Severely refined mineral oil
Base Fluid Viscosity at 40°C	IP 71	184cSt
Base Fluid Viscosity at 100°C	IP 71	15cSt
Thickener	N/A	Organically modified clay
Solids	N/A	Molybdenum disulphide
Temperature Range	N/A	-20°C to + 150°C
4-Ball:		
Weld Load	IP 239 – ASTM D2596	355kg
Mean Hertz Load	IP 239 – ASTM D2596	68kg
Oil Separation 24 hrs at +100°C	IP 121	3% maximum
Water Washout Test	IP 215 – ASTM D1264	0%
Copper Corrosion:		
24 hrs at +100°C	IP 112 – ASTM D130	1a
Corrosion Test 24 hrs at 100°C:		
Mild Steel	N/A	No stain
Aluminium	N/A	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.

Issue: 2 Date: 06-15

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