Dry Moly Paste

Dry film coating of molybdenum disulphide in paste form

Product Overview

ROCOL® Dry Moly Paste is a very high content molybdenum disulphide paste. It is designed to lubricate sliding mechanisms such as plain bearings, pins, cams and slides where a wet lubricant cannot be tolerated.

Also available in aerosol form – see Dry Moly Spray, and solvent based liquid form – see Dry Moly Fluid.

Typical Applications

- ROCOL Dry Moly Paste is an ideal assembly lubricant for disc spring assemblies, sliding mechanisms, plain bearings and other applications where a totally dry film lubricant is required.

Features and Benefits

- ROCOL Dry Moly Paste has a temperature range of -50°C to +450°C.
- ROCOL Dry Moly Paste can be used where wet films cannot be tolerated due to its dry film lubrication that resists pick up of contaminants.
- ROCOL Dry Moly Paste prevents galling, pick-up and seizure.
- ROCOL Dry Moly Paste is resistant to high loads (up to 7,000 kg/cm^2).
- Excellent wear resistance due to its high molybdenum disulphide content.

Directions for Storage and Use

- Ensure surfaces to be treated are clean, dry and free from oil, grease or dirt contamination.
- Apply a thin even coating of ROCOL Dry Moly Paste by rubbing onto the surface with a lint free cloth.
- The applied film can be improved by lightly burnishing with a lint free cloth.
- ROCOL Dry Moly Paste is also available as Dry Moly Spray for application by aerosol, and Dry Moly Fluid for dipping, brushing or spraying.
- The storage temperature of ROCOL Dry Moly Paste should be controlled between +1°C and +40°C.
- Shelf life is 5 years from date of manufacture.

Specifications

ROCOL Dry Moly Paste meets the following specifications:

- Rolls Royce Specification – R-R OMAT 4/53
- NATO Stock No 8030 99 224-7380

Pack Sizes

Pack Size	Part Code
100g	10040
750g	10046

T +44 (0) 113 232 2600
F +44 (0) 113 232 2740
E customer-service@rocol.com
www.rocol.com
ROCOL House, Swillington, Leeds LS26 8BS

Registered Company No. 559693 VAT No. 742 0531 67
Registered Office: Admiral House, St Leonard's Road, Windsor, Berkshire SL4 3BL

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BS EN ISO 9001 Certificate No. FM 12448
BS EN ISO 14001 Certificate No. EMS 67596
OHSAS 18001 Certificate No. OHS 78173

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Property	Test Method	Result
Appearance	**Visual**	**Smooth blue-black paste**
NLGI No.	**IP 50 – ASTM D217**	**3**
Base Type	**N/A**	**Hydrocarbon blend**
Solids	**N/A**	**Molybdenum disulphide**
Solids Content	**N/A**	**50%**
Temperature Range	**N/A**	**-50°C to +450°C**
Drop Point	**IP 132**	**>100°C**

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.

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Torque Setting for Fasteners

When a thread compound is applied to a fastener that will be torque tightened, the torque setting will require adjustment to achieve the correct tension in the fastener. Correct torque settings can be calculated using the methods below.

The following parameters were derived from the tension-torsion relationship measured on M12 x 50mm setscrews with 1.75mm thread pitch, full nut and Form A washers. Fasteners were degreased and a thin layer of thread compound applied in line with instructions on Page 1. Data are for fasteners at 90% of the yield stress:

Fastener Material	Coefficient of Friction (μ)	K-Factor
8.8 Steel Plain Finish	0.092	0.13
8.8 Steel BZP	0.085	0.12
8.8 Steel Hot Dip Galvanised	0.125	0.17
304 Stainless Steel	0.113	0.15
Aluminium 6061	0.086	0.12

$$T = F \times \left[(0.159 \times P) + (0.577 \times d \times \mu) + (D_f \times \frac{\mu}{2})\right]$$

T = Torque Applied (Nm)
F = Tension Generated in Fastener (N)
P = Thread Pitch (m)
d = Pitch Diameter (m)
D_f = Nut Friction Diameter (m)
μ = Coefficient of Friction

$$T = K \times F \times D$$

T = Torque Applied (Nm)
F = Tension Generated in Fastener (N)
D = Nut Nominal Bolt Diameter (m)
K = K-Factor

Many parameters affect the tension-torsion relationship of fasteners, including: Bolt geometry, surface finish, lubricant application method, joint material, torque application method, variation in fastener manufacture etc. Therefore, these parameters above are for guidance only, especially if a different material is used or if geometry is significantly different to M12. Any calculated values are a predictive tool and the final tension should be verified, especially in critical applications. These values do not constitute a specification.

For further guidance, please speak to your usual ROCOL contact or technical.lubricants@rocol.com.

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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