

## SAPPHIRE® Dynamic

High Performance Calcium Sulphonate Grease

### Applications

ROCOL SAPPHIRE Dynamic is a multi-purpose calcium sulphonate thickened grease optimised for highly loaded, slow moving systems operating at elevated temperature.

SAPPHIRE Dynamic has excellent water and corrosion resistance. It performs exceptionally under high temperatures and pressures.

SAPPHIRE Dynamic's chemical and physical properties give outstanding anti-wear and extreme pressure properties – giving long life protection in a wide range of applications.

- Bearings in highly loaded, slow moving systems
- Bearings at elevated temperature and humidity systems
- Pellet mills
- Steel and paper mills
- Heavy industry – plant and machinery in construction, quarrying and mining
- Heavy duty automotive applications – commercial, agriculture and off highway.

### Usage Guidance

SAPPHIRE Dynamic can be applied manually, by a grease gun or keg pump.

### Features and Benefits

- Offers an excellent wide temperature resistance of -20 °C to +180 °C. (Intermittent up to 200 °C)
- Outstanding load carrying / EP performance with a weld load of 800 kg.
- Excellent corrosion and water resistance protecting in humid, wet conditions.
- High viscosity base oil for extreme performance.
- Highly resistant to oxidation.
- Good pumpability.
- Maintains integrity in extreme conditions and continues to protect over extended lubrication intervals, reducing equipment failure, downtime and lubricant usage.

### Storage Guidance

Storage temperature should be kept between 0 °C and 40 °C.

Shelf life is 3 years from date of manufacture.

### Pack Sizes

| Part Code | Pack Size |
|-----------|-----------|
| 12351     | 400 g     |
| 12357     | 18 kg     |
| 12353     | 185 kg    |

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**SAPPHIRE Dynamic**

High Performance Calcium Sulphonate Grease

| Parameter                            | Test Method             | Value  |
|--------------------------------------|-------------------------|--|
| Appearance                           | Visual                  | Smooth Tacky                                   |
| Colour                               | Visual                  | Beige  |
| Thickener                            | -                       | Calcium Sulfonate                              |
| NLGI Grade                           | -                       | 1-2  |
| Worked Penetration                   | ASTM D217               | 285 – 315                                      |
| Base Oil Viscosity @ 40 °C           | ASTM D445               | 420 cSt  |
| Extended Worked Penetration          | ASTM D217 (100K stroke) | ± 30   |
| Water Wash Out                       | IP 215 – ASTM D1264     | < 1%   |
| Copper Corrosion                     | ASTM D4048              | 1 (no tarnish)                                 |
| 4 Ball Wear Scar                     | IP 239 – ASTM D2266     | < 0.55 mm                                      |
| 4 Ball Weld Load                     | IP 239 – ASTM D2596     | 800 kg   |
| EMCOR                                | ASTM D6138              | 0 (no corrosion)                               |
| Drop Point                           | IP 396                  | > 250 °C                                       |
| Oxygen Stability                     | ASTM D942 (100 hrs)     | 5 kPa  |
| Water Spray Off Resistance           | ASTM D4049              | 21 %   |
| Oil Separation                       | IP 121 (40 °C, 168 hrs) | < 1%   |
| Constant Operating Temperature Range | -                       | -20 °C – 180 °C<br>(Intermittent up to 200 °C) |

**Safety Datasheets**

These are available at <https://www.rocol.com/datasheets>. For further assistance, please contact us via the ROCOL website or using the details below.

**Note**

The information in this Technical Datasheet is informed by our experience and feedback from industry. There are many variables outside our control or knowledge which affect the use and performance of our products, for which reason it is given without responsibility. Values quoted are typical and do not constitute a specification.

If you'd like to discuss the suitability of any ROCOL solution for your system, please get in touch.

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