Smooth reliable bearing performance is vital for efficient plant performance. Premature failure of even the smallest bearing can result in significant downtime and loss of production.
Why lubricate?
Correct lubrication helps to protect bearings from premature failure resulting in improved performance, extended, predictable bearing life and a reduction in costly downtime.

Common effects of poor or no lubrication
- Frictional over heating
- Excessive wear
- Corrosion

Leading to
- Reduced efficiency/performance
- Seizure of machinery/equipment
- Premature/excessive bearing failure
- Costly downtime – loss of production
- Unnecessary expense on replacement bearings and shafts

How can ROCOL bearing greases help?
ROCOL bearing greases are designed to provide effective lubrication and protection for bearings operating under a wide variety of conditions.

Our greases help...
- Increase bearing life
- Prevent premature bearing failure
- Extend relubrication intervals
- Reduce downtime

Which in turn...
- Reduces maintenance costs
- Avoids costly unplanned downtime
- Reduces lubricant usage
- Increases productivity

How SAPPHIRE bearing greases help with safe distancing in the workplace
Your operators and engineers will spend less time on routine maintenance tasks which helps maintain safe distancing protocols in the workplace.

- Typically last three times longer than conventional greases, extending relubrication periods
- Less time spent walking the lines topping up grease.
- Outstanding EP performance, far superior to conventional lubricants.
  - This means your bearings will last much longer – fewer unplanned repairs or breakdowns to attend to.
  - Resulting in fewer employees gathered in close proximity.
- Highly resistant to oxidation providing greatly extended lubrication intervals
  - Less time spent on production lines.
Choosing the right product

To select the most suitable ROCOL bearing grease a few key details regarding the application/operating conditions are required, namely:

What condition is the bearing operating in?
- Food/clean environment
- Normal i.e. no extremes of temperature or condition
- Fast speeds i.e. greater than 3,000rpm
- Wet or humid conditions
- High load

What type of bearing is to be lubricated?
- Plain e.g. Phosphor bronze bushes
- Ball, roller, needle, etc.

What temperature range is the bearing operating in?

<table>
<thead>
<tr>
<th>Condition</th>
<th>Bearing type</th>
<th>Temperature range</th>
<th>ROCOL product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal conditions</td>
<td>All</td>
<td>Low: -50°C to +200°C</td>
<td>SAPPHIRE® Premier</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium: -30°C to +160°C</td>
<td>SAPPHIRE® 2, 1 or 000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High: -50°C to +200°C</td>
<td>SAPPHIRE® Premier</td>
</tr>
<tr>
<td>High speed</td>
<td>Electric motor / fan bearings</td>
<td>Medium: -30°C to +160°C</td>
<td>SAPPHIRE® Advance 2</td>
</tr>
<tr>
<td></td>
<td>Light-medium load</td>
<td>Medium: -50°C to +200°C</td>
<td>SAPPHIRE® Premier</td>
</tr>
<tr>
<td></td>
<td>High load</td>
<td>High: -10°C to +235°C</td>
<td>SAPPHIRE® Extreme</td>
</tr>
<tr>
<td>Wet conditions</td>
<td>All</td>
<td>Medium: -20°C to +150°C</td>
<td>SAPPHIRE® Aqua 2</td>
</tr>
<tr>
<td>High loads</td>
<td>Vibration load: All</td>
<td>Medium/High: -10°C to +235°C</td>
<td>SAPPHIRE® Extreme</td>
</tr>
<tr>
<td></td>
<td>Plain, ball, roller, needle, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shock load:</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Plain, ball, roller, needle, etc.</td>
<td>Medium: -30°C to +150°C</td>
<td>SAPPHIRE® Hi-Load 2</td>
</tr>
</tbody>
</table>

* Select whichever temperature range maximum temperature of operation falls within. Except in low temperature applications where the minimum temperature of operation is the main criteria.

**Operating condition**

- Normal conditions
- High speed
- Wet conditions
- High loads

**Bearing type**

- All
- Electric motor / fan bearings
- Light-medium load
- High load
- Vibration load: Plain, ball, roller, needle, etc.
- Shock load: Plain, ball, roller, needle, etc.

**Temperature range**

- Low: -50°C to +200°C
- Medium: -30°C to +160°C
- High: -50°C to +200°C
- Medium: -20°C to +150°C
- Medium/High: -10°C to +235°C
- Medium: -30°C to +150°C
SAPPHIRE® 2, 1 & 000

SAPPHIRE 2, 1 & 000 are heavy duty bearing greases designed for the effective lubrication and protection of all types of ball, roller and plain bearings.

SAPPHIRE grease lasts three times longer than conventional grease reducing the volume of grease required. This results in a major cost saving over standard soap based greases.

- 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.
- Multi-complex soap technology gives enhanced shear stability.

### SAPPHIRE 2
Designed for normal use typically applied by grease gun or keg pump.

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>12171</td>
<td>400g</td>
</tr>
<tr>
<td>12175</td>
<td>18kg</td>
</tr>
<tr>
<td>12176</td>
<td>5kg</td>
</tr>
<tr>
<td>12178</td>
<td>50kg</td>
</tr>
<tr>
<td>12179</td>
<td>185kg</td>
</tr>
</tbody>
</table>

### SAPPHIRE 1
A slightly softer version for easier pumpability particularly when greasing is carried out via remote pipework.

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Size</th>
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</thead>
<tbody>
<tr>
<td>12601</td>
<td>400g</td>
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<tr>
<td>12609</td>
<td>185kg</td>
</tr>
<tr>
<td>12614</td>
<td>18kg</td>
</tr>
</tbody>
</table>

### SAPPHIRE 000
A semi fluid version specifically developed for use in centralised lubrication systems, where very long pipe runs are common. Can also be used in grease filled gearboxes.

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>12284</td>
<td>18kg</td>
</tr>
</tbody>
</table>
SAPPHIRE® Advance 2

SAPPHIRE Advance 2 is a multi-purpose EP bearing grease fortified with PTFE for maximum bearing life.

Multi-purpose grease, fortified with PTFE, for an extensive range of applications particularly high speeds such as electric motors and fan bearings.

- Outstanding high speed performance for most applications found in industry.
- PTFE has an extremely low coefficient of friction and its inclusion in SAPPHIRE Advance 2 reduces stick-slip on start up ensuring a smooth controlled movement.

Typical industries
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.

Typical applications
Excels in applications such as electric motors, oven and refrigeration fans, robots, mechanical handling, palletisers and similar applications where bearings, pins, bushes, slides etc. are subjected to extreme conditions.

SAPPHIRE Advance 2

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Size</th>
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</thead>
<tbody>
<tr>
<td>12441</td>
<td>380g</td>
</tr>
<tr>
<td>12446</td>
<td>18kg</td>
</tr>
</tbody>
</table>

Temp range: -30°C to +160°C

dmN factor 450,000
SAPPHIRE® Premier

SAPPHIRE Premier is an EP bearing grease fortified with PTFE for maximum bearing life.

Multi-purpose grease, fortified with PTFE, for an extensive range of applications including low temperatures, high temperatures and high speed. It also makes an ideal electrical contact grease.

- Fully synthetic base oil leaves minimal residues providing long life even at elevated temperatures.
- PTFE has an extremely low coefficient of friction and its inclusion in SAPPHIRE Premier reduces stick-slip on start up ensuring a smooth controlled movement.
- Outstanding high speed performance for most applications found in industry. dmN factor 500,000
- Prevents wear and corrosion on switchgear and electrical contacts to enhance performance.
- Excellent corrosion resistance to protect in humid, damp and even wet conditions.

**SAPPHIRE Premier**

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>12471</td>
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<tr>
<td>12475</td>
<td>4kg</td>
</tr>
<tr>
<td>12479</td>
<td>170kg</td>
</tr>
</tbody>
</table>

Typical industries
Steelworks, water treatment, quarries, mining, marine, docks, agriculture, construction, textile, brick and tile works and most other industries.

Typical applications
Excels in applications such as electric motors, oven and refrigeration fans, oven bearings, chiller and cooler bearings, injection and rotary moulders, presses, robots, mechanical handling, palletisers and similar applications where bearings, pins, bushes, slides etc. are subjected to extreme conditions.

Temp range:
-50°C to +200°C

dmN factor
500,000
SAPPHIRE® Extreme

SAPPHIRE Extreme is a high load, high temperature MoS₂ bearing grease

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.

- Non-melting, organically modified clay [Bentone] thickened grease fortified with molybdenum disulphide, for excellent high temperature and water resistance.
- Ideal for highly loaded applications, where shock loads and vibration can occur.
- Excellent corrosion resistance to protect in humid, damp and even wet 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.

### Typical industries
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.

### Typical applications
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.

### Temp range:
-10°C to +235°C

### SAPPHIRE Extreme

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>12211</td>
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<tr>
<td>12214</td>
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<td>12216</td>
<td>5kg</td>
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<tr>
<td>12218</td>
<td>50kg</td>
</tr>
<tr>
<td>12219</td>
<td>160kg</td>
</tr>
</tbody>
</table>
SAPPHIRE® Aqua 2

SAPPHIRE Aqua 2 is a multi-purpose water resistant EP bearing grease

Ideal for applications subjected to damp, humid or wet conditions including submerged conditions.

- The tacky nature of SAPPHIRE Aqua 2 ensures it adheres strongly to components to resist water wash-off and even tidal flow in salt water environments.
- Aluminium complex soap technology and EP additives provide outstanding high load performance superior to standard soap thickened lubricants.
- Excellent resistance to water, including salt water ensuring components are protected even in submerged conditions.
- Excellent corrosion resistance to protect in humid, damp and even wet conditions.

Typical industries
Used where a high performance, water resistant lubricant is required such as water treatment, quarries, marine, docks, agriculture, construction, textile, etc.

Typical applications
Exhels in applications such as scrapers, rakes, dockside cranes, water pumps, boat trailers and similar applications.

Temp range: -20°C to +150°C

<table>
<thead>
<tr>
<th>SAPPHIRE Aqua 2</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Code</td>
<td>Size</td>
</tr>
<tr>
<td>12751</td>
<td>380g</td>
</tr>
<tr>
<td>12754</td>
<td>18kg</td>
</tr>
<tr>
<td>12755</td>
<td>4kg</td>
</tr>
<tr>
<td>12758</td>
<td>50k</td>
</tr>
</tbody>
</table>
SAPPHIRE® Hi-Load 2

SAPPHIRE Hi-Load 2 is a long life multi-purpose bearing grease fortified with MoS₂

Combines the triple life performance of SAPPHIRE 2 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.

- Molybdenum disulphide (MoS₂) 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-Load2 maintains its integrity in extreme conditions and continues to protect over extended lubrication intervals, reducing equipment failure, downtime and lubricant usage.

SAPPHIRE Hi-Load 2
Part Code | Size
---|---
12761 | 400g
12764 | 18kg
12765 | 5kg

Typical industries
Quarries, mining, marine, docks, agriculture, construction and brick and tile works.

Typical applications
Excels in applications such as crushers, screens, presses, loaders, scrapers, wagons and similar applications where pins, bushes, slides etc. are subjected to extreme conditions

Temp range:
-30°C to +150°C