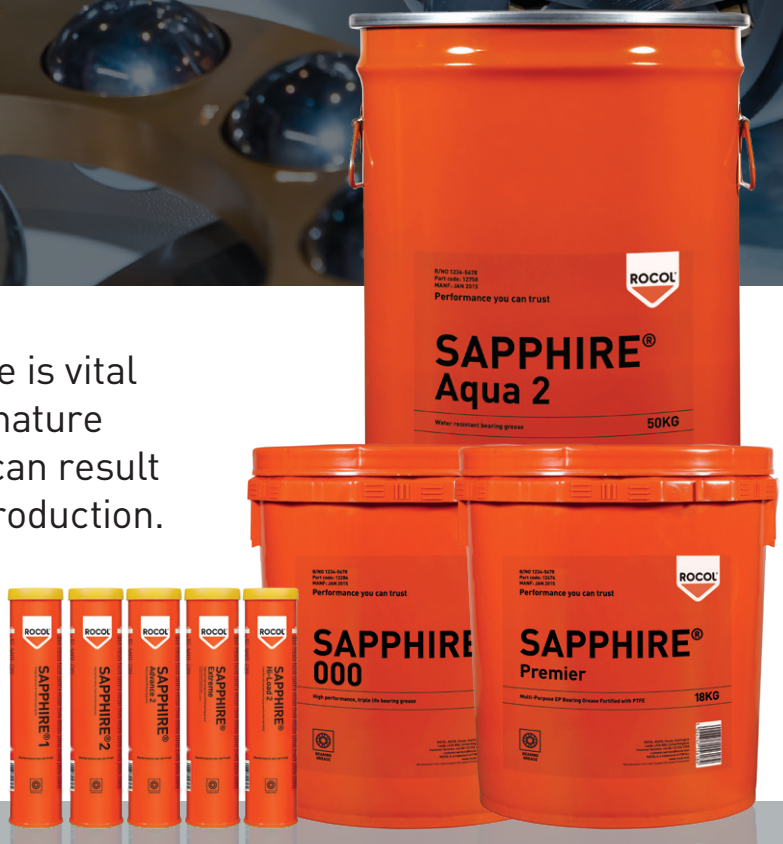
ROCOL® BEARING GREASE GUIDE

Performance you can trust



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.

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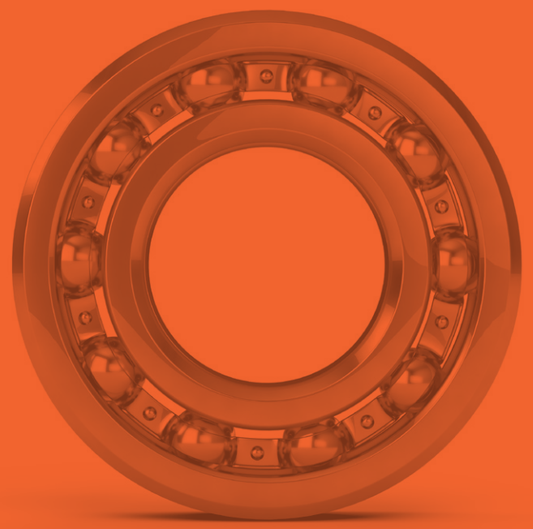

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Why lubricate?

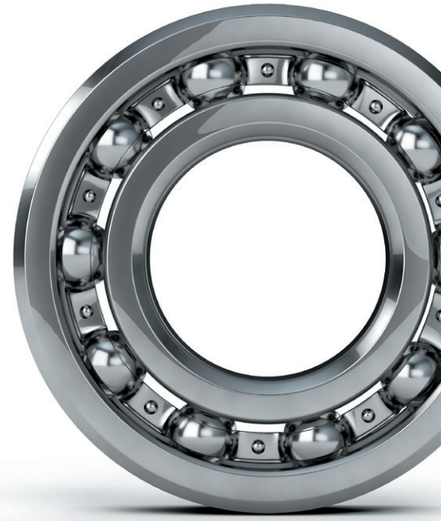
Correct lubrication helps to protect bearings from premature failure resulting in improved performance, extended, predictable bearing life and a reduction in costly downtime.

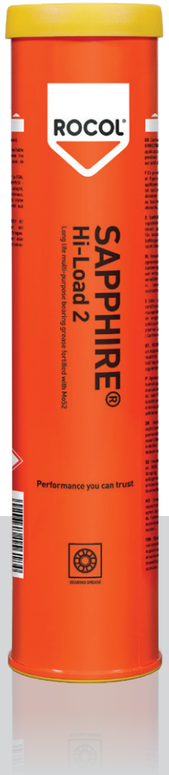
Common effects of poor or no lubrication

- 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?

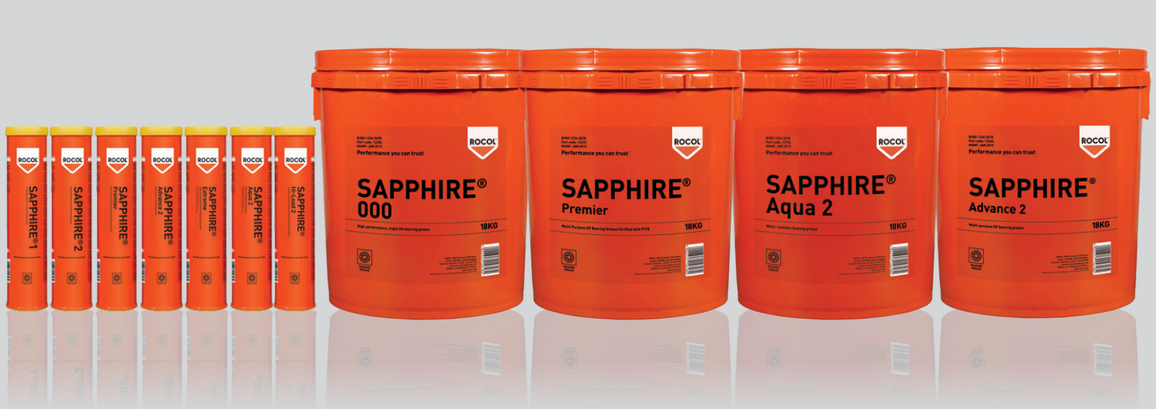
- Plain e.g. Phosphor bronze bushes
- Ball, roller, needle, etc.

What temperature range is the bearing operating in?

Medium	High	Low
-20°C to +110°C in food and wet environments	Up to +200°C in food environments	Down to -45°C
-30°C to +150°C normal conditions	Up to +235°C in all others	

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



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.

Typical applications

Slower moving bearings operating under extreme conditions such as shock loads and wet environments found in all types of industrial applications.

Temp range:
-30°C to +160°C

SAPPHIRE 2

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

Part Code	Size
12171	400g
12175	18kg
12176	5kg
12178	50kg
12179	185kg

SAPPHIRE 1

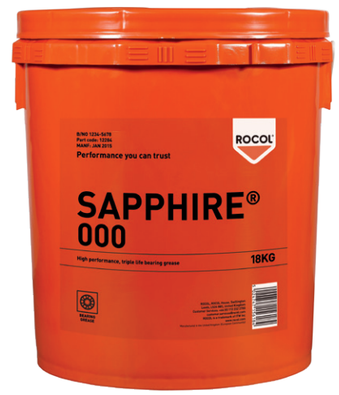
A slightly softer version for easier pumpability particularly when greasing is carried out via remote pipework.

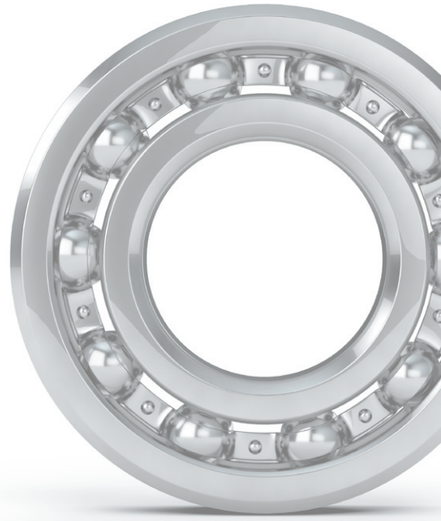
Part Code	Size
12601	400g
12609	185kg
12614	18kg

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.

Part Code	Size
12284	18kg





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.

- Lithium complex soap technology with EP additives. Outstanding high load performance, superior to standard soap thickened lubricants.
- 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

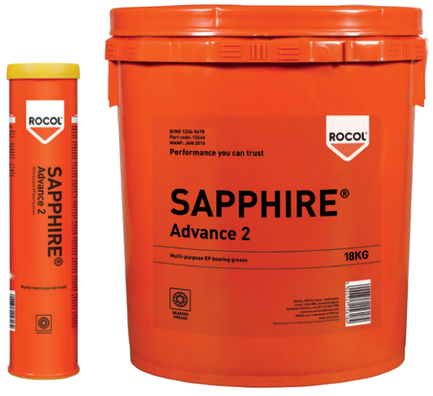
Excels in applications such as electric motors, oven and refrigeration fans, robots, mechanical handling, palletisers and similar applications where bearings, pins, bushes, slides etc. are subjected to extreme conditions.

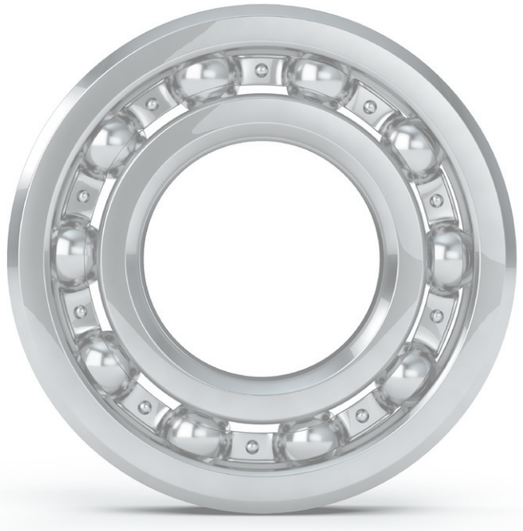
Temp range:
-30°C to +160°C

dmN factor
450,000

SAPPHIRE Advance 2

Part Code	Size
12441	380g
12446	18kg





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.

Typical industries

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

Typical applications

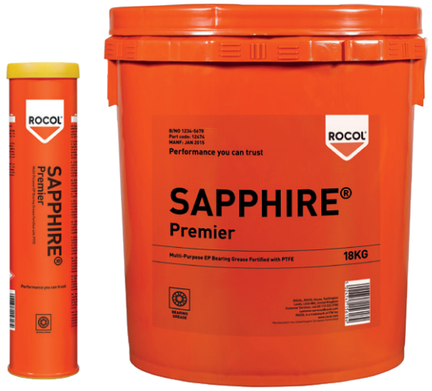
Excels in applications such as electric motors, oven and refrigeration fans, oven bearings, chiller and cooler bearings, injection and rotary moulders, presses, robots, mechanical handling, palletisers and similar applications where bearings, pins, bushes, slides etc. are subjected to extreme conditions.

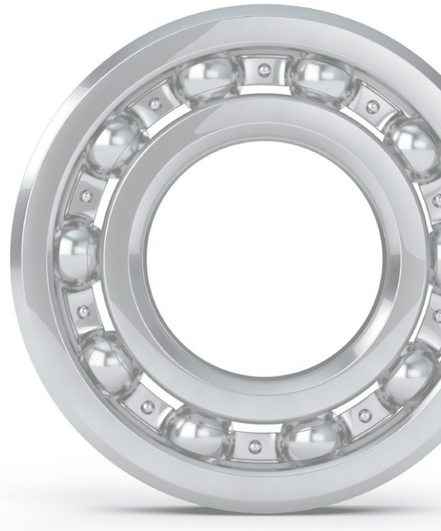
Temp range:
-50°C to +200°C

dmN factor
500,000

SAPPHIRE Premier

Part Code	Size
12471	380g
12474	18kg
12475	4kg
12479	170kg





SAPPHIRE® Extreme

SAPPHIRE Extreme is a high load, high temperature MoS_2 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.

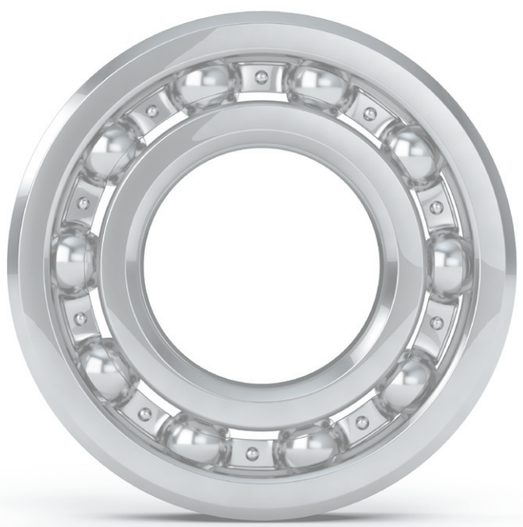
Typical applications

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

Part Code	Size
12211	400g
12214	18kg
12216	5kg
12218	50kg
12219	160kg



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.

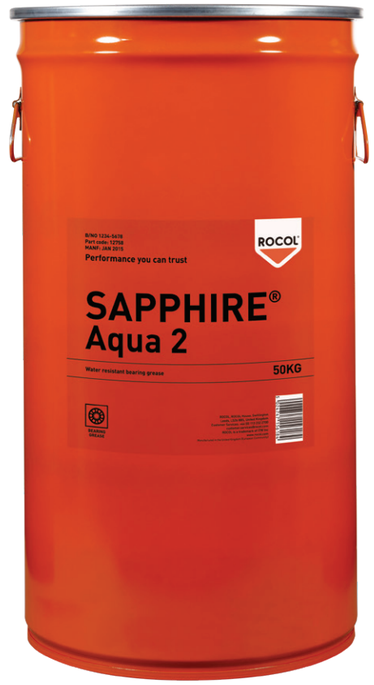
Typical industries

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

Typical applications

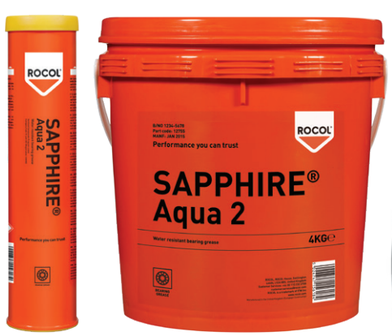
Excels in applications such as scrapers, rakes, dockside cranes, water pumps, boat trailers and similar applications.

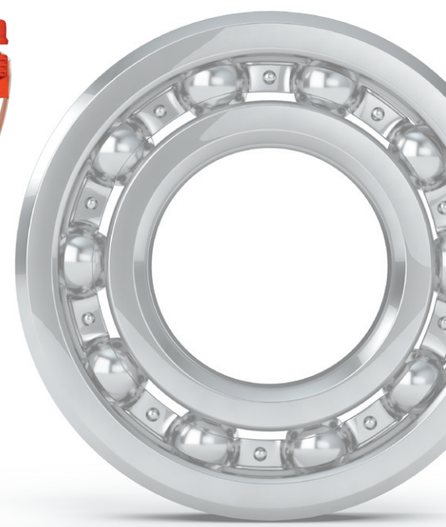
Temp range:
-20°C to +150°C



SAPPHIRE Aqua 2

Part Code	Size
12751	380g
12754	18kg
12755	4kg
12758	50k





SAPPHIRE® Hi-Load 2

SAPPHIRE Hi-Load 2 is a long life multi-purpose bearing grease fortified with MoS_2

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

Typical industries

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

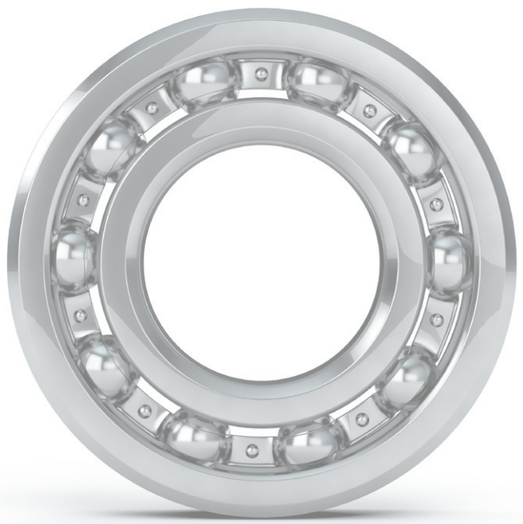
Typical applications

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

SAPPHIRE Hi-Load 2

Part Code	Size
12761	400g
12764	18kg
12765	5kg



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