

## SAPPHIRE® Lo-Temp 2

Triple life multi-purpose bearing grease especially for low temperatures

### Product Overview

ROCOL® SAPPHIRE Lo-Temp 2 heavy duty bearing grease is designed for the effective lubrication and protection of all types of ball, roller and plain bearings particularly when operating at extreme low temperatures.

SAPPHIRE Lo-Temp 2 typically last three times longer than conventional grease extending relubrication periods and reducing the volume of grease required. This results in a major cost saving over standard soap based greases.

SAPPHIRE Lo-Temp 2 offers excellent low start up and running torques particularly when operating at extreme low temperatures.

### Features and Benefits

- Excellent low temperature resistance from -50°C to +120°C.
- Revolutionary multi-complex soap technology provides outstanding EP performance of >800kg weld load far superior to conventional soap thickened lubricants.
- SAPPHIRE Lo-Temp 2 is highly resistant to oxidation providing greatly extended lubrication intervals – typically 3 times longer than conventional lubricants.
- SAPPHIRE Lo-Temp 2 demonstrates extremely low start up and running torques at very low temperatures for reduced drag.
- 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.

### Directions for Storage and Use

- SAPPHIRE Lo-Temp 2 can be applied manually, by grease gun, keg pump or by other methods suitable for an NLGI No. 2 grease.
- Compatible with other soap thickened greases. However, for best results the previous lubricant should be removed prior to application.
- The storage temperature should be controlled between +1°C and +40°C.
- Shelf life is 3 years from date of manufacture.

### Typical Applications

SAPPHIRE Lo-Temp 2 is designed for all types of ball, roller and plain bearings found in all types of industrial applications.

SAPPHIRE Lo-Temp 2 is particularly suitable for bearings operating in extreme low temperature applications such as electric motors and refrigeration fans on chillers and coolers.

SAPPHIRE Lo-Temp 2 is also suitable for use as a multipurpose replacement for SAPPHIRE 2 where the blue dye in SAPPHIRE 2 is unacceptable.

### Typical Applications

Pack Size	Part Code
400g cartridge	12741
4.5kg	12745
18kg	12744

## SAPPHIRE® Lo-Temp 2

Triple life multi-purpose bearing grease especially for low temperatures

Property	Test Method	Result
Appearance	Visual	Smooth beige grease
NLGI No.	IP 50 – ASTM D217	2
Base Type	N/A	Semi-synthetic
Base Fluid Viscosity at 40°C	IP 71	69cSt
Base Fluid Viscosity at 100°C	IP 71	8.5cSt
Thickener	N/A	Multi-complex soap technology
Temperature Range	N/A	-50°C to +120°C
4-ball Weld Load	IP 239 – ASTM D2596	>800kg
4-ball Wear Load Index	IP 239 – ASTM D2596	128kg
Copper Corrosion Test	IP 112 – ASTM D130	1a
Corrosion Test – Emcor	IP 220	0:0
Water Washout Test	IP 215 – ASTM D1264	2%
Starting Torque @ -40°C	IP 186	700g. cm
Running Torque @ -40°C	IP 186	450g. cm
Starting Torque @ -50°C	IP 186	1137g. cm
Running Torque @ -50°C	IP 186	950g. cm

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](http://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: 1 Date: 01-11

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**SAFETY DATA SHEET**  
SAPPHIRE LO-TEMP 2

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Compilation date: 22/11/2012

Revision No: 4

**Section 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

**Product name:** SAPPHIRE LO-TEMP 2

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Use of substance / mixture:** Lubricating Grease

**1.3. Details of the supplier of the safety data sheet**

**Company name:** ROCOL

ROCOL House

Swillington

Leeds

West Yorkshire

LS26 8BS

ENGLAND

**Tel:** +44 (0) 113 232 2700

**Fax:** +44 (0) 113 232 2740

**Email:** [customer-service@rocol.com](mailto:customer-service@rocol.com)

**1.4. Emergency telephone number**

**Emergency tel:** +44 (0) 113 232 2600

**Section 2: Hazards identification**

**2.1. Classification of the substance or mixture**

**Classification under CHIP:** This product has no classification under CHIP.

**2.2. Label elements**

**Label elements under CHIP:**

**Hazard symbols:** No significant hazard.

**2.3. Other hazards**

**PBT:** This substance is not identified as a PBT substance.

**Section 3: Composition/information on ingredients**

**3.2. Mixtures**

[cont...]

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## Hazardous ingredients:

HYDROTREATED MINERAL OIL (LESS THAN 3% DMSO EXTRACT)

EINECS	CAS	CHIP Classification	CLP Classification	Percent
265-155-0	64742-52-5	Substance with a Community workplace exposure limit.	-	30-50%

## Section 4: First aid measures

### 4.1. Description of first aid measures

**Skin contact:** Wash immediately with plenty of soap and water.

**Eye contact:** Bathe the eye with running water for 15 minutes.

**Ingestion:** Wash out mouth with water.

### 4.2. Most important symptoms and effects, both acute and delayed

**Skin contact:** There may be mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be irritation of the throat.

**Inhalation:** No symptoms.

### 4.3. Indication of any immediate medical attention and special treatment needed

## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

**Extinguishing media:** Use water spray to cool containers. Suitable extinguishing media for the surrounding fire should be used.

### 5.2. Special hazards arising from the substance or mixture

**Exposure hazards:** In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

### 5.3. Advice for fire-fighters

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

## Section 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Refer to section 8 of SDS for personal protection details.

### 6.2. Environmental precautions

**Environmental precautions:** Do not discharge into drains or rivers.

### 6.3. Methods and material for containment and cleaning up

**Clean-up procedures:** Transfer to a closable, labelled salvage container for disposal by an appropriate method.

[cont...]

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## 6.4. Reference to other sections

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

**Handling requirements:** Avoid direct contact with the substance.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Store in cool, well ventilated area.

**Suitable packaging:** Must only be kept in original packaging.

### 7.3. Specific end use(s)

## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

**Hazardous ingredients:**

**HYDROTREATED MINERAL OIL (LESS THAN 3% DMSO EXTRACT)**

**Workplace exposure limits:**

**Respirable dust**

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	5mg/m <sup>3</sup>	10mg/m <sup>3</sup>	-	-

### 8.2. Exposure controls

**Respiratory protection:** Respiratory protection not normally required.

**Hand protection:** Protective gloves.

**Eye protection:** Safety glasses with side-shields.

**Skin protection:** Protective clothing.

## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**State:** Paste

**Colour:** Pale brown

**Odour:** Odourless

**Evaporation rate:** Negligible

**Oxidising:** Non-oxidising (by EC criteria)

**Solubility in water:** Insoluble

**Viscosity:** Highly viscous

**Melting point/range°C:** > 200

**Flash point°C:** > 200

**Autoflammability°C:** > 200

**Relative density:** < 1

### 9.2. Other information

**Other information:** Not applicable.

[cont...]

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## Section 10: Stability and reactivity

### 10.1. Reactivity

### 10.2. Chemical stability

**Chemical stability:** Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

### 10.4. Conditions to avoid

**Conditions to avoid:** Heat.

### 10.5. Incompatible materials

**Materials to avoid:** Strong oxidising agents. Strong reducing agents.

### 10.6. Hazardous decomposition products

**Haz. decomp. products:** In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

## Section 11: Toxicological information

### 11.1. Information on toxicological effects

**Toxicity values:** Not applicable.

### Symptoms / routes of exposure

**Skin contact:** There may be mild irritation at the site of contact.

**Eye contact:** There may be irritation and redness.

**Ingestion:** There may be irritation of the throat.

**Inhalation:** No symptoms.

## Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity values:** Not applicable.

### 12.2. Persistence and degradability

**Persistence and degradability:** Only slightly biodegradable.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential:** No bioaccumulation potential.

### 12.4. Mobility in soil

**Mobility:** Non-volatile. Absorbed only slowly into soil.

### 12.5. Results of PBT and vPvB assessment

**PBT identification:** This substance is not identified as a PBT substance.

[cont...]

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## 12.6. Other adverse effects

## Section 13: Disposal considerations

### 13.1. Waste treatment methods

**Disposal of packaging:** Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

## Section 14: Transport information

**Transport class:** This product does not require a classification for transport.

## Section 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

### 15.2. Chemical Safety Assessment

**Chemical safety assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

## Section 16: Other information

### Other information

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

Compiled in accordance with REACH.

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.