

## TECHNICAL DATA

# SAPPHIRE HI-TORQUE

**Semi-Synthetic Industrial Gear Oils  
with unique Start Up Protection  
System(SUPS)**

**Viscosity Grades ISO VG 100, 220, 320, 460 and 680**

## Description

ROCOL Sapphire Hi-Torque is a range of thermally stable, semi-synthetic gear oils of ISO VG 100, 220, 320, 460, 680 classification.

ROCOL Sapphire Hi-Torque contains an advanced Start Up Protection System, with extreme pressure and load carrying performance characteristics designed to protect gear teeth on start up and provide protection during use.

ROCOL Sapphire Hi-Torque is designed to resist the tendency to generate deposits, sludge and varnish due to breakdown at high temperatures.

ROCOL Sapphire Hi-Torque has been developed to cope with the higher loads and temperatures experienced in modern, smaller, higher performance gearboxes, where use of a longer life lubricant is becoming increasingly important.

## Outstanding Features

- SUPS Start Up Protection System
- High thermal stability
- Superior load carrying
- Excellent corrosion protection
- Low foaming

## Directions for use

Gearboxes should be drained and flushed prior to filling, to the normal top up level, with ROCOL Sapphire Hi-Torque.

### ROCOL Lubricants

ROCOL House, Swillington, Leeds LS26 8BS, England.

Tel: 0113 232 2600 Fax: 0113 232 2760

ROCOL is a BS EN ISO 9001 registered company.

ROCOL is a trade mark of ITW Inc.

This information in this publication is based on our experience and reports from customers.

## Technical Data

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| Appearance                  | : Blue liquid                                                          |
| Odour                       | : Characteristic                                                       |
| Base Oil Type               | : Semi-synthetic                                                       |
| Viscosities (40°C)          | : 100, 220, 320, 460 and 680cSt                                        |
| Operating temperature range | : -20°C to +120°C                                                      |
| Storage                     | : Normal storage requirements<br>(0°C to 40°C). Do not allow to freeze |

## ROCOL Sapphire Hi-Torque meets the requirements of:

- United States Steel 224
- American Gear Manufacturers Association (AGMA) 250.04.
- Deutsche Industrie Norm (DIN) 51517 part 3
- David Brown S1.53.101.

## Health and Safety

Further Technical Data and the Safety Data Sheets are available from the Customer Service Department, ROCOL Lubricants, ROCOL House, Swillington, Leeds, LS26 8BS, England.

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