Product Data

Spheerol SY Range

Multi-purpose high performance grease

Description

The Castrol Spheerol™ SY series are super premium extreme pressure (EP) greases primarily intended for a wide variety of applications at extremes of temperature. They combine the unique features of a synthetic base fluid with those of a lithium complex thickener. The wax-free nature of the synthetic base oil and the low coefficient of traction (compared with mineral oils), provide excellent low temperature pumpability and very low starting and running torque. They offer the potential for energy savings and can reduce operating temperatures in the load zone of rolling element bearings. The lithium complex thickener gives excellent adhesion, structural stability and water resistance. The greases have a high level of chemical stability and provide excellent protection against wear, rust and corrosion; at high and low temperatures.

Spheerol SY series do not contain - lead, chlorine or nitrites.

Application

Spheerol SY 1501 is an NLGI 1 grade grease with an exceptionally high ISO VG 1500 synthetic base fluid. It is intended for use in plain and rolling element bearings operating at extremely slow speeds, under heavy loads and high temperatures. Spheerol SY 1501 has a recommended operating temperature range of -20°C to 180°C with appropriate re-lubrication intervals.

Spheerol SY 2202 is a multi-purpose, extreme pressure grease recommended for heavy duty automotive and industrial applications. It uses an ISO VG 220 synthetic fluid and although it is a NLGI 2 grade product, it has excellent low temperature pumpability and a recommended operating temperature range of -40°C to 180°C.

Spheerol SY 4601 is recommended for tough industrial applications. It gives outstanding bearing protection under high loads at low to moderate speeds and in applications where water resistance is critical. Spheerol SY 4601 is recommended for use in steel and paper mills. Recommended operating temperature range is -40°C to 180°C.

Spheerol SY 4600 is formulated from an ISO VG 460 synthetic base fluid to an NLGI grade 00 consistency. Recommended operating temperature range is -40°C to 180°C. It's primary use is in grease filled gear cases subject to high temperatures, where conventional semi-fluid greases deteriorate rapidly. It is also suited for sealed heavy-duty truck wheel bearings.

Advantages

Spheerol SY series offer the following benefits:

- Reduced downtime and maintenance costs because of reduced wear, rust and corrosion
- Outstanding high and low temperature performance
- Extended service life with longer intervals between re-lubrication
- Reduced energy consumption due to low traction coefficient
- Ability to perform well in the presence of water

Typical Characteristics

Name	Method	Units	1501	2202	4601	4600
Thickener type	-	-	Lithium complex	Lithium complex	Lithium complex	Lithium complex
Consistency	ISO 2137 / ASTM D217	NLGI Grade	1	2	1.5	00
Colour	-	-	Yellow / Brown	Yellow / Brown	Yellow / Brown	Yellow / Brown
Texture	-	-	smooth/ slightly tacky	smooth/ slightly tacky	smooth/ slightly tacky	smooth/ slightly tacky
Dropping point	ISO 2176 / ASTM D566	°C/°F	>260	>260	>260	>240
Base Oil Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm²/s	-	-	47	47
Base Oil Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm²/s	1500	220	460	460
Worked Penetration (60 strokes @ 25°C / 77°F)	ISO 2137 / ASTM D217	0.1 mm	310-340	265-295	290-320	400-430
Water Spray-off	ASTM D4049	%wt loss	-	20	-	-
Rust Test - EMCOR (distilled water)	ISO 11007 / ASTM D6138	Rating	0-0	0-0	0-0	0-0
Water Wash-out @ 38°C / 100.4°F	ISO 11009 / ASTM D1264	%wt loss	1.4	-	3	-
Water Wash-out @ 79°C / 174.2°F	ISO 11009 / ASTM D1264	%wt loss	-	-	5	-
Four Ball Weld Load test - Weld Point	ISO 11008 / ASTM D2596	kgf	326.3	>326.3	>326.3	367.1
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr)	ISO 51350 / ASTM D2266	mm	0.6	0.5	0.5	0.5
Timken OK Load	ASTM D2509	kg / lbs	24.9/55	24.9/55	24.9/55	24.9/55
Roll Stability test - Shear Stability	ASTM D1831	0.1 mm	+60 max	+60 max	+60 max	+60 max

Additional Information

In order to minimise potential incompatibilities when converting to a new grease, all previous lubricant should be removed as much as possible prior to operation. During initial operation, re-lubrication intervals should be monitored closely to ensure all previous lubricant is purged.

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