



## Optitemp SW 1

High Performance Grease for Wind Turbines

### Description

Castrol Optitemp™ SW 1 is a lithium based grease containing a synthetic base fluid and premium extreme pressure (EP) additives. 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. It can also offer the potential for energy savings and can reduce operating temperatures in the load zone of rolling and sliding element bearings. The lithium complex thickener gives excellent adhesion, structural stability, sealing effects and water resistance. Primarily intended for a wide variety of applications at extremes of temperature, the grease also has a high level of chemical stability and provides excellent protection against wear, rust and corrosion.

### Application

Castrol Optitemp SW 1 is recommended for tough industrial applications especially as encountered in Wind Turbine Main Bearings, Yaw bearings and Pitch bearings. It gives outstanding bearing protection under high loads at low to moderate speeds and in applications where water resistance is critical. Castrol Optitemp SW 1 is also recommended for use in steel and paper mills. Recommended operating temperature range is -40°C to 180°C.

### Advantages

- 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	Optitemp SW 1
Appearance	Visual	-	Homogenous
Colour	Visual	-	Beige
Consistency	ISO 2137 / ASTM D217	NLGI Grade	1.5
Dropping Point	ISO 2176 / ASTM D566	°C/°F	>260°C/>500°F
Base Oil Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	460
Base Oil Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	46
Water Wash-out at 60°C/140°F	ISO 11009 / ASTM D1264	%wt loss	<5
Rust Test - EMCOR (Distilled water)	ISO 11007 / ASTM D6138	Rating	0/0
Rust Test -EMCOR (1%NaCl solution)	ISO 11007 modified	Rating	0/0
Worked Penetration (60 strokes @ 25°C / 77°F)	ISO 2137 / ASTM D217	0.1 mm	290-320
Four Ball EP Properties, Weld Point	ASTM D2596	Kg Load	315
Four Ball Wear (40 kg,60°c)	ASTM D2266	mm	0.4
Four Ball Wear test - Weld Load	DIN 51350-4A	N	2800

Subject to usual manufacturing tolerances.

## 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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