Product Data

Castrol Optitemp® TT1 & TT1EP

Castrol Optitemp TT1 and TT1EP - high performance lubricating greases for arctic to high temperature ranges.

MICROFLUX TRANS® (TRANS=TRiple Action Non-sacrificial Surface engineering) improves friction surfaces to an extent not possible with normal machining processes and conventional EP lubricants. In a tribological system the polarized MICROFLUX TRANS additives instantaneously create a passive film on friction surfaces before friction occurs. At a given load level, the MICROFLUX TRANS additives release compounds forming a resistant protective layer on friction surfaces. Under severe load, components of the MICROFLUX TRANS additive combination are activated and diffuse into the surfaces initiating an improvement of their friction characteristics through plastic deformation. The organic reaction products become a component of the tribopolymer system. Unlike the case with conventional lubricants, the tribopolymers formed by MICROFLUX TRANS are long-chained compounds with excellent lubricity and adhesion. The load carrying area is improved, a hydrodynamic lubrication film is easier to maintain. This unique physio-chemical reaction is CASTROL surface engineering and achieves a non-sacrificial micro-smoothing of the friction surfaces. The MICROFLUX TRANS additive technology provides optimum wear protection and an extremely low coefficient of friction even under extremes of pressure, vibration, shock loads, at high or low speeds or varying operational conditions.

CASTROL OPTITEMP TT1 - brownish lubricant for long-term lubrication of plain and antifriction bearings. Suitable for high speed bearings.

CASTROL OPTITEMP TT1 EP - black long-term lubricant containing MoS_2 for very heavy loads.

Both products have excellent corrosion resistance. They are temperature stable, providing long service life and offer superior structural stability in applications where the grease is "worked".

Application

Fill bearing housing only about half-full with **Castrol Optitemp TT1 and TT1EP** or follow the specifications of antifriction bearing manufacturers. Clean new bearing before initial fill. Do not mix with other lubricating greases. Consult Technical Service at Castrol Lubricants, Inc. when compatibility with a formerly used product is necessary. Maximum performance can be assured only if the product is applied properly and not mixed with other lubricants.

Castrol Industrial Americas
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Tel (877) 641 1600
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MICROFLUX TRANS® registered trademark of a patented Castrol additive combination for performing surface engineering in tribological systems.

Advantages

- Temperature range: -60°C/-76°F to +120°C/+248°F, short-term operation up to +150°C/+302°F is possible
- Temperature independent over a wide application range
- Reduction of running-in period, suitable for lifetime lubrication
- Surface improvement to an extent not possible before
- Optimum wear protection in high load range
- Smoothing of existing pitting in damaged equipment is possible
- Excellent corrosion protection, largely prevents fretting corrosion
- Compatible with all conventional sealing materials, ferrous and nonferrous metals
- Resistant to cold and hot water
- Pumpable in central lubrication systems
- For largely maintenance-free low temperature lubrication

Usage

- For all grease lubricated applications at temperatures from -60°C/-76°F to +120°C+248°F.
- For antifriction and plain bearings, sliding surfaces for long-term or lifetime lubrication at low temperatures.
- For bearings running at high speeds (approx. 1,000,000 Dn factor).
- For high speed spindle bearings (spinning and grinding machines).

Castrol Optitemp TT1 EP is recommended for friction surfaces exposed to extreme loads or where emergency running properties are required.

- Cost-benefit offered by MICROFLUX TRANS® additive technology
- extended lifetime of machine elements and wear parts, lower maintenance and labor costs by minimized wear and friction
- -full load operation within shortest time, virtually eliminating the running-in period
- lower costs for lubricants and waste oil disposal because of significant extensions of both service life and relubrication intervals
- energy savings due to reduced coefficient of friction, lower temperature of lubricant and component, improvement in operating efficiency
- product consolidation, i.e., simplification and reduction of lubes and spare parts
- reduction of noise resulting from high frequency stick-slip for "life" lubrication in some applications.

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Typical Characteristics

	Unit	Value		Test Method
		1	1 EP	
Article No	-	08318	08307	-
Color	-	Light-brown	Black	Visual
Base	-	Organic/inorganic thickener Synthetic base oil		-
Consistency / NLGI grade	-	1	1	DIN 51818
Worked penetration Pw 60	0.1 mm	310 – 340	310 – 340	DIN ISO 2137
Density @ + 20°C/+ 68°F	Kg/m^3	965	994	DIN 51757
Dropping point	°C	> 300	243	
	°F	> 572	469.4	DIN ISO 2176
Corrosion protection (SKF Emcor)	-	1	0	DIN 51802
Oil separation @ + 40°C/ + 104°F/168 h	Wt. -%	5.50	4.30	DIN 51817
Flow pressure @ -35°C/- 31°F	HPa	235	257	DIN 51805
Copper corrosion	-	1b	2b	DIN 51811

This technical data is based on average test results. Minor deviations may occur from case to case

Subject to usual manufacturing tolerances.

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