

Tribol 3020/1000-2

Lubricating greases with TGOA

Description

CASTROL TRIBOL™ 3020/1000-2 grease with TGOA™ is designed for very heavy duty service in adverse environments. Through its formulation and advanced TGOA additive system it is able to withstand the shock and heavy loading commonly found in the processing of primary metals as well as in cement, construction and mining industries. The high base oil viscosity provides a sufficient lube film (Kappa, Lambda value) also in large bearings with slow speed. TGOA is an additive package designed to reduce friction while providing surface protection and improvement. The TGOA additive package outperforms all other EP and antiwear additives because of its unique action on frictional surfaces. In consideration of possible adverse effects and the environment, no materials of expressed concern (i.e. lead, barium, zinc) are used in manufacturing of CASTROL TRIBOL 3020/1000-2.

CASTROL TRIBOL 3020/1000-2 grease has a lithium soap as a thickener. The base oils are high viscosity mineral oils forming a stable lube film to withstand high continuous loads, shock loads and vibrations. The TGOA additive package is activated by high specific loads and corresponding temperatures causing a chemical-physical reaction. This results in a smoothing of surface roughness without creating adhesive wear (cold-welding).

The results of the TGOA additives can be compared with a rolling process in the micro-range. The surface roughness are gradually leveled and smoothed. Through smoothing of the working surfaces, the loads are distributed over increasing areas and the actual load carrying areas are enlarged. During the running-in process, the TGOA additive package creates an optimum of smooth contact surfaces.

If, because of shock loads or stop-and-go operation, surface roughness peaks redevelop, the TGOA additive package is automatically reactivated. Surface roughness is again smoothed down and lubrication optimized. • Corrosion and oxidation inhibitors maximize effective rust protection and long life of the grease. CASTROL TRIBOL 3020/1000-2 grease meets NLGI consistency grade 2.

Application

- Typical applications for CASTROL TRIBOL 3020/1000-2 is in rolling and sliding bearings, bushings, slides and general lubrication, especially where loads may be quite high and speeds low.
- Application of CASTROL TRIBOL 3020/1000-2 may be made manually with grease guns or automatic dispensing systems.
- Temperature operating range from - 30 °C to + 120 °C.

Advantages

- CASTROL TRIBOL 3020/1000-2 offers optimum protection and long life to seals, as well as forming a protective barrier in damaged seals.
- Reduced friction due to the effect of the TGOA additives is most evident under boundary and mixed film lubrication conditions. This benefit is most pronounced where frequent start-ups, slow speeds or high and unexpected loads are encountered.
- Overall savings are derived from the above and result from less labor and downtime, smoother, more efficient operation with longer parts life and extended lubrication cycles.

Typical Characteristics

Name	Method	Units	Tribol 3020/1000-2
DIN Classification	DIN 51502	-	KP 2 K - 30
NLGI grade	DIN 51818	-	2
Thickener	-	-	Lithium
Dropping Point, Grease	ISO 2176	°C	> 180
Worked Penetration	DIN ISO 2137	0.1 mm	265 - 295
Viscosity at 40°C	DIN 51366	mm ² /s	1000
Viscosity 100°C	DIN 51366	mm ² /s	54
Flashpoint	ISO 2592	°C	230
Oil Separation	DIN 51817	%	2.8
Water Resistance, 90°C	DIN 51807	Rating	0
Pressure drop after 100h at 99°C	DIN 51808	hPa	< 300
Pressure drop after 300h at 99°C	DIN 51808	hPa	< 400
Flow Pressure @ -20°C	DIN 51805	hPa	650
Copper Corrosion, 24hrs @ 100C	DIN 51811	Rating	1
Four Ball Wear Test scar diameter	DIN 51350-0, 5-E	mm	< 0.8
Roll Stability	ASTM D 1831	% change	5
Four ball EP test Weld load	DIN 51350/4	N	4000/4200
Rust Prevention properties	ASTM D 1743	Rating	1
Operating Temperature	-	°C	-30 / +120

Subject to usual manufacturing tolerances

Additional Information

CASTROL TRIBOL 3020/1000-2 should not be mixed with greases using a different thickener. Lubrication intervals should be increased gradually to ensure complete removal of previous lubricant and to use the TGOA additives to their full advantages.

Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing condition.

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