



## Tribol™ GR 4747/220-2 HT

High-temperature grease

### Description

CASTROL TRIBOL™GR 4747/220-2 HT (previously named Tribol™ 4747/220-2) high-temperature grease with TGOA™ is a clear multi-service lubricant designed to extend the service life of bearings in heavy-duty applications and at elevated temperatures. Because of the high base oil viscosity CASTROL TRIBOL GR 4747/220-2 HT provides a heavier oil film for applications at slower speeds, higher loads and/or higher temperatures. The patented TGOA additive technology under those adverse conditions provides for an unsurpassed protection against friction and wear.

- CASTROL TRIBOL GR 4747/220-2 HT is formulated from a mixture of high-quality synthetic base oils (PAO & ester) and a lithium complex thickener.
- In addition to this it contains corrosion inhibitors and antioxidants for long service life.
- The load carrying, antiwear and friction reducing capabilities of CASTROL TRIBOL GR 4747/220-2 HT exceed conventional complex greases. High performance is the result of the TGOA additives which, under relatively high specific loads and related temperatures, promote a non-destructive smoothing of the surface roughness in the micro-range.
- The smoothing effect leads to an increase of the actual load carrying area and reduces friction.
- TGOA additives are very effective in protecting the machined surface of bearings during the critical “running-in” period.
- Good bearing surfaces are essential for long bearing life. 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 and lubrication optimized.

### Application

- CASTROL TRIBOL GR 4747/220-2 HT grease with TGOA is designed as a multi-service lubricant for heavy-duty applications of rolling and sliding bearings for temperatures up to 160°C (peak temperatures up to 180°C).
- CASTROL TRIBOL GR 4747/220-2 HT grease should be used when loads are moderate to heavy and speeds are slow to moderate.

### Advantages

- CASTROL TRIBOL GR 4747/220-2 HT with TGOA offers increased load carrying capability due to higher viscosity base oils and surface smoothing as well as friction reducing properties of TGOA.
- The lithium complex thickener is characterized by its excellent working and shear stability.
- Excellent thermal stability (dropping point >250 °C).
- The TGOA additives ensure reduced wear, lowered operating temperatures as well as extended service life leading to decreased maintenance and repair costs.

## Typical Characteristics

Name	Method	Units	Tribol GR 4747/ 220-2 HT
DIN Classification	DIN 51502	-	KP HC E 2 P -40
Thickener Type	-	-	Lithium complex
Worked Penetration	ASTM D217 / ISO 2137	0.1 mm	265 – 295
Dropping Point	ASTM D566 / ISO 2176	°C	>250
Base Oil Viscosity @ 40°C	ASTM D445 / ISO 3104	mm <sup>2</sup> /s	220
Base Oil Viscosity @ 100°C	ASTM D445 / ISO 3104	mm <sup>2</sup> /s	25.4
Viscosity Index	ASTM D2270 / ISO 2909	-	146
Flash Point - open cup method	ASTM D92 / ISO 2592	°C	280
Water Resistance	DIN 51807-1	Rating	0
Oxidation Stability - Rotating Pressure Vessel test (100h @ 99°C)	ASTM D942 / DIN 51808	pressure drop psi	<250
Oxidation Stability - Rotating Pressure Vessel test (300h @ 99°C)	ASTM D942 / DIN 51808	pressure drop psi	<400
Copper Corrosion (24 hrs, 100°C)	ASTM D4048	Rating	2
Emcor Test	ASTM D6138 / ISO 11007 / DIN 51802	Rating	0/0
Four Ball Wear test - Wear Scar Diameter	DIN 51350-5E	mm	<0.7
SRV Test	DIN 51843-02-S	μ	<0.1
FAG-FE 9 test (A/1500/6000-150)	DIN 51821-02	-	Passed
Flow pressure @ -20°C	DIN 51805	mBar	225
Flow pressure @ -30°C	DIN 51805	mBar	340
Flow pressure @ -35°C	DIN 51805	mBar	450

1 mm<sup>2</sup>/s ^ 1cSt Subject to usual manufacturing tolerances

## Additional Information

- CASTROL TRIBOL GR 4747/220-2 HT grease with TGOA should not be mixed with greases using a different thickener.
- Lubricating intervals should be increased gradually after changing over to CASTROL TRIBOL GR 4747 to ensure complete removal of the previous lubricants and to use the TGOA additives to their full advantage. Their performance might be affected by residual greases containing solid lubricants!
- At peak temperatures of 180 °C relubrication intervals should be established by inspection.

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