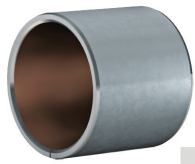
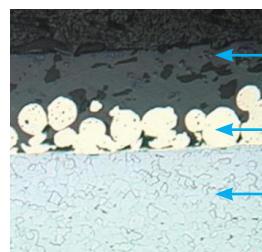


Advanced universal bearing material for high loads and wear resistance requirements

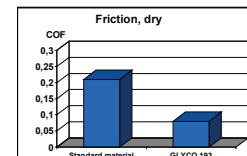
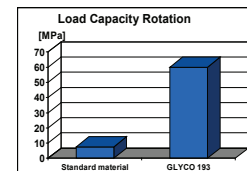


GLYCO® 193 bushing and mass production washer example



Photomicrograph of the 3-layer material (steel back + sliding layer of porous bronze + compound of PPS thermoplastic, PTFE and additives)

Mix
[PPS+PTFE +fillers]
CuSn10
Steel



Challenge

Some particular fluid lubricated applications need to be able to endure very high loads under poor lubrication supply, thus operating for long periods under mixed friction conditions at higher wear rate and elevated temperatures.

Other special applications are running greased or even without any lubrication under high axial or radial pressures reducing considerably the service life when standard materials are used.

Solution

GLYCO® 193 is a thermoplastic-based material including also PTFE, especially developed for requirements combining high wear resistance and low friction.

The increased overlay thickness of 60 to 100 µm compared to a PTFE-based material can be used as additional wear reserve as well in dry applications as in lubricated applications, extending the service life.

Temperature range from -60 to 220 °C, higher than common thermoplastics.

Key Features

- Usable under severe fluid lubricated or greased conditions
- Running as well as under dry conditions due to the PTFE additive
- High pv-value
- Very high wear resistance
- Very high load capacity
- Low friction (improved through PTFE)
- High thermal strength
- Rotating, oscillating and axial motion possible

Benefit	Details
High Load capacity	static: max. 250 MPa dynamic: max. 120 MPa
High p.v max. value	pv max. = 7.5 MPa x m/s under dry running conditions* *Standard F-M test conditions pv max. can be significantly higher under oiled lubricated conditions
Low Friction coefficient	unlubricated: from 0.05 to 0.10 (example: approx. 0.06 at 60 MPa load) oil lubricated: from 0.03 to 0.06

Additional Information

GLYCO® 193 is a three layer composite material. A porous tin bronze sinter structure is applied on a steel back, which is impregnated with a PPS sliding material with friction improving and wear reducing additives. An overlay of the same sliding material is located above the filled bronze structure.

Maximum sliding velocity of 2 m/s under dry operation.

In a lubricated application, higher values up to 10 m/s or more depending on lubricant supply conditions are possible.

Applications:

- running fluid lubricated like pumps, shock absorbers, transmissions.
- running greased like seat recliners, brakes.
- running dry like vibration dampers, belt tensioners, actuators.

Other applications with risk of high bearing wear



GLYCO® 193 half shell

Performance

Durability

Friction
Reduction

Enabling
Technologies

Green
Technologies

