

- **Tolerance: wide range of temperatures**
- **Resistance**
- **Durability**

Sliding material

Technical data sheet reference no.: FT En CV 4 1 1

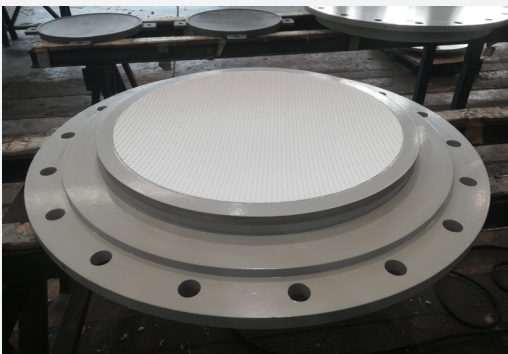
Aim

ISOGLIDE is a sliding material that is specially designed for use with sliding bearings of all kinds, and specifically with pot bearings or spherical bearings.

Description

ISOGLIDE is a polymer of the modified polytetrafluorethylene (PTFE) type. Like PTFE, ISOGLIDE has not only remarkable sliding qualities (with a very low coefficient of friction) but has markedly superior loading capacities. ISOGLIDE thus reduces the running costs of bearings, particularly spherical bearings.

ISOGLIDE is a thermoplastic that retains its exceptional qualities even at extremely high or extremely low temperatures.



ISOGLIDE: top view

Thanks to its capacities, bearings using ISOGLIDE are perceptibly more compact than bearings using standard PTFE.

Performance

Compared to PTFE and the alternative material UHMWPE, ISOGLIDE was developed to achieve the following performance features:

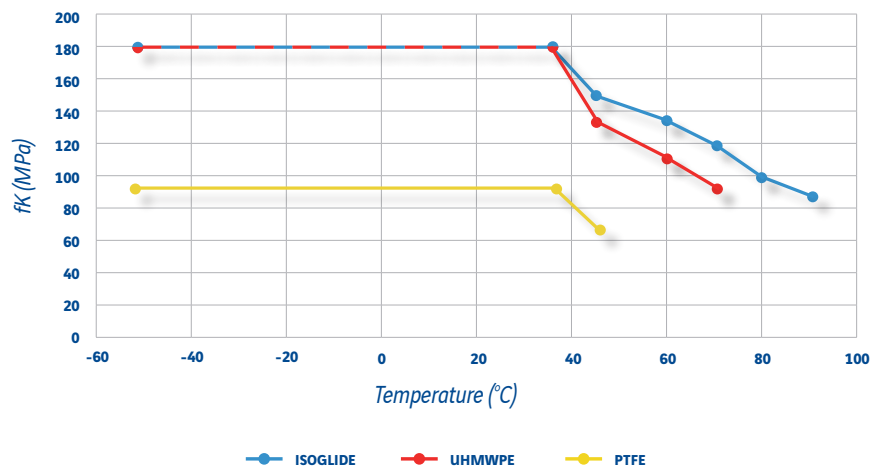
- 1. Compressive strength:** ISOGLIDE tolerates a contact pressure that is double that of PTFE.
- 2. Extended service life:** ISOGLIDE has long-term resistance to friction that is five times higher than that of PTFE, resulting in a much longer service life.
- 3. Wide range of temperatures:** ISOGLIDE is effective between -50°C and $+90^{\circ}\text{C}$, whereas PTFE is ineffective above 48°C and UHMWPE above 70°C .
- 4. Low resistance to friction:**

ISOGLIDE has lower coefficients of friction than PTFE and UHMWPE at moderate temperatures.

Behaviour of ISOGLIDE during tests

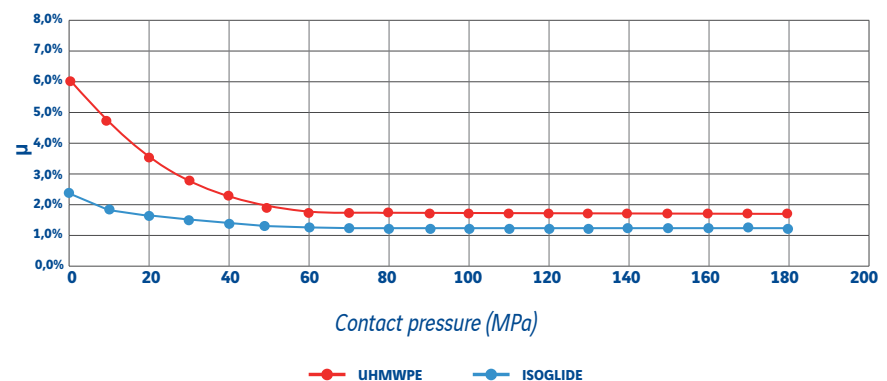
The bearing capacity of sliding products depends on their characteristic stress level. That of ISOGLIDE is twice that of PTFE and remains higher than that of UHMWPE at higher temperatures. Thanks to this characteristic, bearings using ISOGLIDE can be used in structures built in regions with a high ambient temperature such as the Middle East.

Characteristic compressive stress



The coefficient of friction of sliding surfaces depends on the contact pressure and temperature. This coefficient is an important factor in the sizing of bearings (the lower the coefficient, the more compact the bearing), and also in the force transmitted to the supports.

Friction μ at moderate temperature $-5^{\circ} < T$



Benefits

The use of ISOGLIDE as a sliding material makes it possible to:

- Design smaller-sized bearings than with PTFE.
- Design more economical spherical bearings.
- Optimise and simplify the methods of installation for spherical bearings, due to their smaller size.
- Obtain a longer service life for the bearings.



*Tetron SB bearing using ISOGLIDE
Tanzania project*



*Tetron SB bearings using ISOGLIDE
Al Bayt Stadium - Qatar - 2018*

Successful projects

- Lahore Orange Line, Pakistan, 2017
- Mabey Hire, United Kingdom, 2017
- THQ Sofia (Telekom Head Quarters), Hungary, 2017
- Al Bayt Stadium, Qatar, 2018
- A816 – Lavapesson, Switzerland, 2018
- Boumerdes, Algeria, 2018
- Komarom Bridge, Hungary, 2018
- Low Fold Bridge, United Kingdom, 2018
- M62 River Ouse Bridge, United Kingdom, 2018
- Whitwhick, United Kingdom, 2018
- Woodford, United Kingdom, 2018
- Saint Enoch, United Kingdom, 2019

Certifications

Spherical bearings using ISOGLIDE have been the subject of a European Technical Assessment (ETA) under reference no. ETA-17/0808, on the basis of a European Assessment Document (EAD) with reference EAD 15-05-0009-03.01.

Spherical bearings using ISOGLIDE benefit from a CE marking on the basis of ETA-17/0808 and on EAD 15-05-0009-03.01.

This certification was obtained after the conducting of various conclusive tests in accordance with standard EN1337, and specifically a long-term durability test during which the material is tested over a total displacement of 50,000 metres.



In addition to these certifications, Freyssinet has been granted authorisation to supply spherical bearings using ISOGLIDE for railways.

Local sales contact