

# PTFE GRAPHITE 25% | POLYTETRAFLUOROETHYLENE

## ► Main features

Low friction coefficient with excellent wear resistance; slightly compressive.

## ► Applications

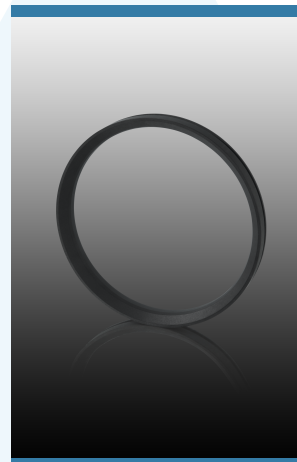
high speed creep bearings for contact, even with hard surfaces.

## ► Application sectors

Pumps and fluid management  
Chemical  
Medical and Pharmaceutical  
Power Plant, Offshore,  
Oil & Gas Mechanic  
Industrial automation  
Electric and semiconductors

## ► FDA Compatibility No

## ► Available colours



| PROPERTIES                                                         | REGULATIONS              | UM                                | PTFE GRAPHITE 25% |
|--------------------------------------------------------------------|--------------------------|-----------------------------------|-------------------|
| PHYSICAL PROPERTIES                                                |                          |                                   |                   |
| Density                                                            | DIN53479                 | g/cm <sup>3</sup>                 | 2.11              |
| Water absorption (50% at 23° C)                                    | **DIN53495               | %                                 | -                 |
| Maximum temp. for use in the air for short duration                | -                        | °C                                | -                 |
| Maximum temperature of use in continuous air                       | -                        | °C                                | 260               |
| Minimum temperature of use in continuous air                       | -                        | °C                                | -200              |
| MECHANICAL PROPERTIES                                              |                          |                                   |                   |
| Yield stress/tensile strength ( $\sigma_s$ )                       | ASTD 4894                | N/mm <sup>2</sup>                 | 16                |
| Elongation at break ( $\epsilon_s$ )                               | DIN53455                 | %                                 | -                 |
| Breaking load ( $\sigma_r$ )                                       | DIN53455                 | N/mm <sup>2</sup>                 | 12-16             |
| Elongation at break ( $\epsilon_r$ )                               | *DIN53455 <sup>(4)</sup> | %                                 | 100               |
| Impact resistance                                                  | *DIN53453                | kJ/m <sup>2</sup>                 | -                 |
| Impact resistance, notched test                                    | *DIN53453                | kJ/m <sup>2</sup>                 | -                 |
| Rockwell hardness                                                  | DIN53465                 | Scala M                           | 65                |
| Compression test, load 1% deform. nominal                          | ASTND 695                | N/mm <sup>2</sup>                 | 7,3               |
| Elasticity module                                                  | *DIN53457 <sup>(5)</sup> | N/mm <sup>2</sup>                 | -                 |
| THERMIC PROPERTIES                                                 |                          |                                   |                   |
| Melting temperature                                                | -                        | °C                                | -                 |
| VICAT softening temperature                                        | DIN53460                 | °C                                | -                 |
| Deformation temperature under bending load                         | DIN53461                 | °C                                | -                 |
| Coefficient of linear thermal expansion ( $\alpha$ )               | DIN53752                 | K <sup>-1</sup> X10 <sup>-4</sup> | 8-11              |
| Thermal conductivity at 23°                                        | DIN52612                 | W/(Kxm)                           | -                 |
| ELECTRICAL PROPERTIES                                              |                          |                                   |                   |
| Volume resistivity                                                 | **DIN53482               | $\Omega$ /cm                      | -                 |
| Surface resistivity                                                | **DIN53482               | $\Omega$                          | -                 |
| Dielectric constant at 10 <sup>3</sup> HZ (on thickness of 1 mm.)  | **DIN53483               | -                                 | -                 |
| Dielectric dissipation factor (tan $\delta$ ) a 10 <sup>3</sup> HZ | **DIN53483               | -                                 | -                 |
| Dielectric strength (on thickness of 1 mm.)                        | **DIN53481               | kV/mm                             | -                 |
| Electrical leakage resistivity                                     | 112/030TI                | -                                 | -                 |
| OTHER PROPERTIES                                                   |                          |                                   |                   |
| Possibility of gluing                                              | -                        | -                                 | No                |
| Absence of physiological risks                                     | FDA                      | -                                 | No                |
| Dry friction coefficient on steel                                  | DIN53375                 | -                                 | 0,07              |
| Flammability                                                       | UL94                     | -                                 | -                 |
| UV stability                                                       | -                        | -                                 | -                 |

\* : MEASUREMENTS ON TEST TUBES IN ANHYDROUS STATE

\*\* : MEASUREMENTS ON EQUILIBRIUM TUBES  
WITH U.R. 50% AT A TEMPERATURE OF 23° C

(3): ON CYLINDERS Ø 12X30 MM

(5): TRACTION SPEED 1 MM / MIN

(4): TRACTION SPEED 5 MM/MIN

(6): TRACTION SPEED 20 MM/MIN