

PTFE 103

Color - Brown

PTFE 103 (Polytetrafluorethylene + 40% bronze).

PTFE 103 – material made of filled semi-finished thermoplastic based on polytetrafluoroethylene.

PTFE 103 has an exclusively wide temperature range (from -200°C up to $+260^{\circ}\text{C}$), very low friction coefficient and high chemical resistance.

PTFE 103 has a «non-stick» surface and doesn't absorb moisture. By its fillers the time-depended deformations lower than with PTFE 101 (reduction in cold flow, increased resistance to extrusion).

Besides filler - bronze powder, which increases extrusion resistance and decreases friction coefficient, the main distinctive characteristics are shown in the below table.

Application

PTFE 103 can be used for production of U-Rings, seals, anti-extrusion back-up rings, support rings, chevron seals and guide rings. PTFE 103 mainly used in applications with high thermal and chemical stress.

This material can also be used in cases where low friction, high extrusion and deformation resistance are required, and PTFE 101 can not be used.

Mainly used

- Seals for low friction at high stress
- Sliding and back-up elements
- Seal parts with elastic support (elastomers, springs)

PTFE 103 Material Data Sheet

| Properties | Value | Unit | Standard |
|---|----------------|---------------------------------|----------------------|
| Hardness | ≥58 | Sh D | ASTM D2240 |
| Density | 2,98 - 3,16 | g/cm ³ | ASTM D792 |
| Tensile strength | ≥18 | N/mm ² | ISO 12086 ISO 527 |
| Elongation at break | ≥200 | % | ISO 12086 ISO 527 |
| Compressive strength at 1% deformation | ≥8 | N/mm ² | ASTM D695 |
| Deformation under load at room temperature 24 hours at 13,7 N/mm ² | ≤8 | % | ASTM D621 |
| Permanent deformation as above after 24 hours of rest at room temperature | ≤5 | % | ASTM D621 |
| Coefficient of Linear Expansion (25° - 100°C) | 8 - 11 | 10 ⁻⁵ (mm/mm)/ °C | ASTM D696 |
| Min. service temperature | -200 | °C | |
| Max. service temperature | +260 | °C | |