

Technical Data Sheet PTFE Bronze 40

PTFE + 40 % Bronze

PTFE + 40 % bronze – bronze-filled PTFE, very high wear/compressive strength, thermally conductive, dissipative, -200 ... +260 °C

Typische Eigenschaften

- Very high wear and compressive strength
- High thermal conductivity (dissipates frictional heat)
- Low creep (cold flow), high load capacity (PV)
- Very wide temperature range (-200 ... +260 °C)
- Low coefficient of friction, self-lubricating
- Electrically dissipative / antistatic (not an insulator)
- Non-flammable (UL 94 V-0)
- Machining only (not melt-processable/weldable)

Typische Industrien

- Plain bearings and bushes
- Piston rings and compressor construction
- Sealing technology
- Hydraulics and pneumatics
- Pump and valve technology
- Mechanical and plant engineering

	Testverfahren	Einheit	Wert
Physical Properties			
Density	ISO 1183	g / cm ³	3.10
Colour			brown (bronze)
Mechanical Properties			
Tensile strength	ASTM D 4894	MPa	≥ 20
Elongation at break	ASTM D 4894	%	≥ 220
Hardness	ISO 868	Shore D	60–65
Coefficient of friction (dyn., vs. steel)	ASTM D 1894		~ 0.15
Thermal Properties			
Service temperature		°C	-200 ... +260
Coefficient of thermal expansion	DIN 52612	10 ⁻⁵ / K	≈ 10
Thermal conductivity	DIN 52612	W / (m·K)	≈ 0.5
Electrical Properties			
Volume resistivity	IEC 60093	Ω·cm	~ 10 ⁹
Electrical behaviour			dissipative / antistatic (not an insulator)

	Testverfahren	Einheit	Wert
Fire Behaviour			
Flammability	UL 94		V-0 (non-flammable)

PTFE + 40 % bronze is a bronze-filled PTFE compound for heavily loaded sliding and sealing applications. The values stated are typical characteristic values; they serve as an aid to material selection and are not a legally binding warranty of specific properties and may vary between manufacturers. The bronze content markedly increases wear and compressive strength as well as thermal conductivity, makes the material electrically dissipative and brown. Important: chemical resistance is reduced compared with virgin PTFE – acids, strong alkalis, oxidising media, ammonia and hot steam attack the bronze. Bronze PTFE is not intended for food contact. PTFE must not be overheated (decomposition from approx. 260 °C releasing harmful gases).

Liedtke
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