

Technical films

Tecfilm® FEP TC 00445

Description: Tecfilm® FEP TC 00445 is a transparent, thermoplastic film, that can be heat sealed, thermoformed, vacuum formed, heat bound, welded, metallized and laminated. Tecfilm® FEP TC 00445 offers great abrasion resistance, especially against other thermoplastics and a low permeability towards gases and chemicals. Tecfilm® FEP TC 00445 exhibits excellent dielectrical properties.

Applications: Tecfilm® FEP TC 00445 can be used for bearings, seals, O-rings, electrical high temperature insulations, non-stick coatings and linings in containers. The technical properties of Tecfilm® FEP TC 00445 are essential for laboratory applications.

Delivery forms: Tecfilm® FEP TC 00445 can be delivered on a roll or as tape, customized cut or die cut part as well as self-adhesive. Other delivery forms upon customer request.

General properties	Test method	Unit	Value
Density	ISO 1183	g/cm ³	2,12 - 2,17
Highest service temperature		°C	200 – 205
Flammability			Incombustible
Waterabsorption at 23°C		%	< 0,05
Thermal properties	Test method	Unit	Value
Melting temperature	ATM 2116	°C	253 – 282
Coefficient of thermal expansion	DIN 52612	10 ⁻⁵ *K ⁻¹	10 – 14
Thermal conductivity at 23°C		W/K*m	0,20
Specific heat at 23°C		kJ/kg*K	1,17
Oxygen index		%	> 95

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Tecfilm® PTFE TC 00445

Mechanical properties	Test method	Unit	Value
Tear strength at 23°C	ISO 527	N/mm ²	19 – 25
Tear strength at 150°C	ISO 527	N/mm ²	4 – 6
Yield strength at 23°C	ISO 527	N/mm ²	12
Elongation at break at 23°C	ISO 527	%	250 – 350
Tensile modulus at 23°C	ISO 527	N/mm ²	350 – 700
Flexural stress at given strain at 23°C	ISO 178	N/mm ²	
Flexural modulus at 23°C	ISO 527	N/mm ²	660 – 680
Ball impression hardness at 23°C	ISO 2039		23 – 29
Rockwell hardness R	ISO 2039		20 – 30
Electrical properties	Test method	Unit	Value
Shore-hardness	DIN 53505		55 – 60
Coefficient of friction			0,3 – 0,35
Dielectric constant at 100 Hz	IEC 60250		< 2,1
Dielectric constant at 10 ⁶	IEC 60250		< 2,1
Dielectric loss factor at 100 Hz		Ω	0,5 – 0,7
Tracking resistance	IEC 60112		KA3 _C
Dielectric strength	IEC 60243-2	kV/mm	> 50
CTI-Value			600

Trademark information: Tecfilm® is a registered trademark of the company Dr. Dietrich Müller GmbH, Germany.

Please note:

The information in this data sheet is based on our current knowledge and experience. They do not disengage the fabricator and the user from own tests and inspections because of the plenty of possible effects. There is no judicial binding assurance of certain properties or of the qualification for a concrete application in our declaration. We recommend consulting us in individual cases. The acceptor of our products has to observe possible industrial property rights as well as present laws by himself.

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