

TECASINT 8001 yellow-brown - Stock Shapes (rods, plates, tubes)

Chemical Designation

PTFE (Polytetrafluorethylene)

Colour

ochre-brown

Density

1.88 g/cm³

Fillers

20% polyimide

Main features

- very good slide and wear properties
- very good electrical insulation
- high toughness
- very good UV and weather resistance
- good chemical resistance
- sensitive to hydrolysis in higher thermal range

Target Industries

- cryogenic engineering
- electrical engineering
- food engineering
- fixture construction
- medical technology
- textile industry

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50 mm/min, 23°C	15	MPa	DIN EN ISO 527-1	
Elongation at break (tensile test)	50 mm/min, 23°C	200	%	DIN EN ISO 527-1	
Shore hardness	Shore D, 23°C	65	D	DIN 53505	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		- 20	°C	DIN EN ISO 11357	(1) Found in public sources. Individual testing regarding application conditions is mandatory.
Service temperature	long-term	250	°C	-	1)
Thermal expansion (CLTE)	50-200°C	14.4 / -	10 ⁻⁵ K ⁻¹	DIN 53 752	2)
Specific heat		1	J/(g*K)	-	(2) Thermal expansion XY/Z axis
Thermal conductivity	40°C	0.25	W/(K*m)	ISO 8302	
Electrical properties	parameter	value	unit	norm	comment
volume resistivity	23°C	10 ¹⁸	Ω*cm	DIN IEC 60093	
Dielectric constant	10 kHz, 23°C	2.3		DIN IEC 60250	
Other properties	parameter	value	unit	norm	comment
Water absorption	24 h in water, 23°C	0.70	%	DIN EN ISO 62	(1) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	1)

Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values that can be used primarily for comparison purposes for material selection. These values are within the normal tolerance range of product properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. Unless otherwise noted, these values were determined by tests at reference dimensions and machined specimen. As the properties depend on the dimensions of the semi-finished products and the orientation in the component (esp. in reinforced grades), the material may not be used without a separate testing under individual circumstances. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at www.ensinger-online.com. Technical changes reserved.