

TECASON P MT XRO black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PPSU (Polyphenylsulfone)

Colour

black opaque

Density

1.34 g/cm³

Fillers

barium sulfate

Main features

- x-ray opaque
- high thermal and mechanical capacity
- hydrolysis and superheated steam resistant
- good impact strength
- high stiffness
- high strength
- good chemical resistance
- high gamma radiation resistance

Target Industries

- medical technology

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	77	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	2600	MPa	DIN EN ISO 527-2	1) (2) For flexural test: support span 64mm, norm specimen.
Tensile strength at yield	50mm/min	77	MPa	DIN EN ISO 527-2	(3) For Charpy test: support span 64mm, norm specimen.
Elongation at yield (tensile test)	50mm/min	6	%	DIN EN ISO 527-2	n.b. = not broken
Elongation at break (tensile test)	50mm/min	> 50	%	DIN EN ISO 527-2	(4) Specimen in 4mm thickness
Flexural strength	2mm/min, 10 N	107	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	2400	MPa	DIN EN ISO 178	
Impact strength (Charpy)	max. 7.5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU	3)
Notched impact strength (Charpy)	max. 7.5J	7	kJ/m ²	DIN EN ISO 179-1eA	
Ball indentation hardness		139	MPa	ISO 2039-1	4)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		218	°C	DIN EN ISO 11357	1) (1) Found in public sources.
Service temperature	short term	190	°C		2) (2) Found in public sources.
Service temperature	long term	170	°C		Individual testing regarding application conditions is mandatory.
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.1 / 0.2	%	DIN EN ISO 62	1) (1) Ø ca. 50mm, h=13mm
Resistance to hot water/ bases		+	-		2) (2) + good resistance
Resistance to weathering		-	-		3) (3) - poor resistance
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	4) (4) 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.

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