

TECAPRO MT black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PP (Polypropylene)

Colour

black opaque

Density

0.92 g/cm³

Fillers

heat stabilized

Main features

- heat stabilized
- biocompatible
- good chemical resistance
- hydrolysis and superheated steam resistant
- low moisture absorption
- good slide and wear properties

Target Industries

- medical technology
- food technology
- pharmaceutical industry

Mechanical properties

	parameter	value	unit	norm	comment
Tensile strength	50mm/min	37	MPa	DIN EN ISO 527-2	
Modulus of elasticity (tensile test)	1mm/min	2000	MPa	DIN EN ISO 527-2	1)
Tensile strength at yield	50mm/min	37	MPa	DIN EN ISO 527-2	
Elongation at yield (tensile test)	50mm/min	5	%	DIN EN ISO 527-2	
Elongation at break (tensile test)	50mm/min	34	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	56	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	2000	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	16/26/49	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	1600	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	160	kJ/m ²	DIN EN ISO 179-1eU	5)
Notched impact strength (Charpy)	max. 7,5J	5	kJ/m ²	DIN EN ISO 179-1eA	
Ball indentation hardness		100	MPa	ISO 2039-1	6)

Thermal properties

	parameter	value	unit	norm	comment
Glass transition temperature		-10	°C	DIN EN ISO 11357	1)
Melting temperature		161	°C	DIN EN ISO 11357	
Heat distortion temperature	HDT, Method A	87	°C	ISO-R 75 Method A	
Service temperature	short term	140	°C		2)
Service temperature	long term	100	°C		
Thermal expansion (CLTE)	23-60°C, long.	13	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	14	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	

Electrical properties

	parameter	value	unit	norm	comment
surface resistivity		10 ¹²	Ω	-	
volume resistivity		10 ¹⁴	Ω*cm	-	1)

Other properties

	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.01 / 0.02	%	DIN EN ISO 62	1)
Resistance to hot water/ bases	(+)		-		2)
Resistance to weathering	(+)				
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)

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