

Physical properties PA 6 FR

Product characteristics:

- Free of halogen and phosphorus
- Flame retardant and self-extinguishing
- High hardness and rigidity

Product applications:

- Rail vehicle construction
- Aviation industry
- Ship building

General properties	Test method	Unit	Value
Color			
Density	DIN EN ISO 1183-1	g/cm ³	1.17
Water absorption	DIN EN ISO 62	%	3.0
Flammability (Thickness 3 mm / 6 mm)	UL 94		V0/V0
Mechanical properties			
Yield stress	DIN EN ISO 527	MPa	82
Elongation at break	DIN EN ISO 527	%	3
Tensile modulus of elasticity	DIN EN ISO 527	MPa	3800
Shore hardness	DIN EN ISO 868	scala D	83
Thermal properties			
Crystalline grain melting range	ISO 11357-3	°C	222
Thermal capacity	DIN 52612	kJ / (kg*K)	1.70
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ /K	90
Service temperature, long term	Average	°C	-20 ... 85
Service temperature, short term (max.)	Average	°C	160
Heat deflection temperature	DIN EN ISO 75, Verf. A, HDT	°C	65
Electrical properties			
Volume resistivity	IEC 60093	Ω*cm	10 ¹³
Surface resistivity	IEC 60093	Ω	10 ¹⁶

This table is a valuable help in the choice of a material. The data listed here fall within the normal range of products properties, but they should not be used to establish material specification limits nor used alone as the basis of design.