Technical datasheet

PA 6 FR (Polyamid 6 flame retardant)

Example of application
› vehicle construction; shipbuilding industry; electrical industry; mining

Advantages	Disadvantages
› flame retardant › self-extinguishing › high hardness and mechanical resistance › halogen and phosphorus free › good sliding behaviour and wear performance	› brittle

Basic information	Specification
Format	**round material:** 12 mm up to 100 mm available in 3 m length **sheets:** 6 mm up to 90 mm available in 3 m x 0.62 m

Physical properties	Standard term/Specification*	Unit	Testing method
Density	1.17	g/cm^3	ISO 1183
Moisture ingress	3	%	DIN EN ISO 62

Mechanical properties	Standard term/Specification*	Unit	Testing method
Tensile strength	82	MPa	DIN EN ISO 527
Elongation at break	3	%	DIN EN ISO 527
E-Module	3,800	MPa	DIN EN ISO 527
Notch toughness	2	kJ/m^2	ISO 179
Rochwell hardness	n.sp.	MPa	DIN EN ISO 2039

Thermal properties	Standard term/Specification*	Unit	Testing method
Thermal conductivity	0.3	W/(m·K)	DIN 52612
Linear thermal expansion coefficient based on a fixed initial length	0.9	$K^{-1} \cdot 10^{-4}$	DIN 53752
	1.8	mm	At initial length of 1.000 mm and a temperature difference of 20 °C.
Max. operating temperature, long-term	85	°C	
Max. operating temperature, short-term	160	°C	
Min. operating temperature, long-term	- 20	°C	

Electrical properties	Standard term/Specification*	Unit	Testing method
Resistance	10^{13}	Ω·cm	DIN EN 62631-3-1
Outer surface coefficient	10^{16}	Ω	DIN EN 62631-3-2
Puncture resistance	30	kV/mm	DIN EN 60243

Legend
n.sp. = not specified n.a. = not applicable

Should you require binding and exact values, please ask for the appropriate factory certificate. This may incur additional costs. Please note that all specifications are standard values only, which are subject to production-related fluctuations.
*Higher specification on request.

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technical plastics

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