

Material datasheet

Material: PAS-PAI 4301 + 4501

mechanical characteristics

Characteristic	Standard	Unit	Value
Yield stress (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	110
Yield strain (dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	%	3.3
Tensile strength (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	110
Elongation at break (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	%	5
Tensile E-modulus (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	5500
Max. permissible pressure load (continuous)	Faigle	MPa (N/mm ²)	28
Charpy notched impact strength (+23°C, dry)	ISO 179/1eA	kJ/m ²	4
Ball indentation hardness (dry)	ISO 2039-1	MPa (N/mm ²)	200
Coefficient of sliding friction (p = 0.3N/mm ² / 0.6N/mm ² , v = 0.27m/s, against steel hardened and ground, dry)			0.12

thermal characteristics

Characteristic	Standard	Unit	Value
min. Operating temperature (continuous)		°C	-20
max. service temperature (continuous)		°C	250
max. service temperature (short-term)		°C	270
Heat deflection temperature HDT/A (1.8 N/mm ²)	ISO 75-1/-2 DIN 53461 ASTM D 648	°C	280
Coefficient of linear thermal expansion (23 - 60°C)	ISO 11359	10 ⁻⁶ /K	25
Thermal conductivity (+23°C)	DIN 52612	W/(m×K)	0.54

These data are guideline values which are subject to change depending on the type of manufacture of the test specimens and stress. These data are based on our own experience and on manufacturer's data. However, they are provided without guarantee, since each application is different and must be considered with reference to its specific influence parameters.

combustibility characteristics

Characteristic	Standard	Unit	Value
UL94 flammability	IEC 60695-11-10	class	V0

electrical characteristics

Characteristic	Standard	Unit	Value
Dielectric constant, relative permittivity (1 MHz, dry)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150		5.4
Dielectric loss factor (1 MHz, dry)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150		0.042
Surface resistivity (dry)	DIN IEC 60093 (DIN VDE 0303-30) ASTM D 257	Ω	10 ¹³

physical characteristics

Characteristic	Standard	Unit	Value
Density, Gross density	ISO 1183 DIN 53479 ASTM D 792	g/cm ³	1.45
Moisture absorption at saturation - standard climate (23°C, 50% RF)	ISO 62 ISO 1110	%	1.9