

Material datasheet Material: PAS-PE10

mechanical characteristics

Characteristic	Standard	Unit	Value
Yield stress (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	20
Yield strain (dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	%	15
Tensile strength (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	37
Tensile stress at break (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	37
Elongation at break (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	%	300
Tensile E-modulus (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	680
Max. permissible pressure load (continuous)	Faigle	MPa (N/mm ²)	5
Charpy impact strength (+23°C, dry)	ISO 179 DIN 53453	kJ/m ²	No Break
Charpy notched impact strength (+23°C, dry)	ISO 179 DIN 53453	kJ/m ²	120
Coefficient of sliding friction (p = 0.3N/mm ² / 0.6N/mm ² , v = 0.27m/s, against steel hardened and ground, dry)			0.24

thermal characteristics

Characteristic	Standard	Unit	Value
min. Operating temperature (continuous)		°C	-250
max. service temperature (continuous)		°C	80
max. service temperature (short-term)		°C	100
Heat deflection temperature HDT/A (1.8 N/mm ²)	ISO 75-1/-2 DIN 53461 ASTM D 648	°C	42
Coefficient of linear thermal expansion (23 - 60°C)	ISO 11359	10 ⁻⁶ /K	200
Thermal conductivity (+23°C)	DIN 52612	W/(m×K)	0.4

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	HB

electrical characteristics

Characteristic	Standard	Unit	Value
Dielectric constant, relative permittivity (1 MHz, dry)	DIN IEC 60250 (DIN VDE 0303-4) ASTM D 150		3.0
Surface resistivity (dry)	DIN IEC 60093 (DIN VDE 0303-30) ASTM D 257	Ω	10 ¹⁴

physical characteristics

Characteristic	Standard	Unit	Value
Density, Gross density	ISO 1183 DIN 53479 ASTM D 792	g/cm ³	0.93
Moisture absorption at saturation - standard climate (23°C, 50% RF)	ISO 62 ISO 1110	%	0.01

chemical characteristics

Characteristic	Standard	Unit	Value
UV light and weathering			conditionally stable