

Material datasheet

Material: PAS-PE10 AST

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	%	11
Tensile strength (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	30
Tensile stress at break (+23°C, dry)	ISO 527-1/-2 DIN 53455 ASTM D 638	MPa (N/mm ²)	30
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)	700
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	100
Ball indentation hardness (dry)	ISO 2039-1	MPa (N/mm ²)	34
Coefficient of sliding friction (p = 0.3N/mm ² / 0.6N/mm ² , v = 0.27m/s, against steel hardened and ground, dry)			0.25

thermal characteristics

Characteristic	Standard	Unit	Value
min. Operating temperature (continuous)		°C	-150
max. service temperature (continuous)		°C	80
max. service temperature (short-term)		°C	90
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

combustibility characteristics

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

electrical characteristics

Characteristic	Standard	Unit	Value
Surface resistivity (dry)	DIN IEC 60093 (DIN VDE 0303-30) ASTM D 257	Ω	<10 ⁹

physical characteristics

Characteristic	Standard	Unit	Value
Density, Gross density	ISO 1183 DIN 53479 ASTM D 792	g/cm ³	0.94
Moisture absorption at saturation - standard climate (23°C, 50% RF)	ISO 62 ISO 1110	%	0.01