

TECAPEI natural - 型材 (棒材, 板材, 管件)

化學命名

PEI (聚醚醯亞胺)

顏色

琥珀色 透明色

密度

1.28 g/cm³

主要特色

- 高熱與機械能力
- 高能輻射抗性
- 良好的尺寸穩定性
- 固有的防火性

目標產業

- 電子學
- 半導體科技
- 航空與航太科技
- 汽車工業
- 真空科技

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	127	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
彈性模數 (張力測試)	1mm/min	3200	MPa	DIN EN ISO 527-2	1) (2) For flexural test: support span 64mm, norm specimen.
降伏點抗拉強度	50mm/min	127	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
降伏點伸長率	50mm/min	7	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
斷裂伸長率	50mm/min	35	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
抗彎強度	2mm/min, 10 N	164	MPa	DIN EN ISO 178	2)
彈性模數 (彎曲測試)	2mm/min, 10 N	3300	MPa	DIN EN ISO 178	
壓縮強度	1% / 2% / 5% 5mm/min, 10 N	23/41/92	MPa	EN ISO 604	3)
壓縮模數	5mm/min, 10 N	2800	MPa	EN ISO 604	4)
衝擊強度(Charpy)	max. 7.5J	113	kJ/m ²	DIN EN ISO 179-1eU	5)
蕭氏硬度	D	88		DIN EN ISO 868	
熱特性	參數	值	單位	標準	註解
玻璃轉化溫度		216	°C	DIN EN ISO 11357	1)
熔化溫度		n.a.	°C	DIN EN ISO 11357	2)
使用溫度	short term	200	°C		3)
使用溫度	long term	170	°C		
熱膨脹 (CLTE)	23-60°C, long.	5	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
熱膨脹 (CLTE)	23-100°C, long.	5	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
熱膨脹 (CLTE)	100-150°C, long.	6	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
比熱		1.2	J/(g*K)	ISO 22007-4:2008	
導熱係數		0.21	W/(K*m)	ISO 22007-4:2008	
電性特性	參數	值	單位	標準	註解
表面電阻		10 ¹⁴	Ω	-	
體積電阻		10 ¹⁴	Ω*cm	-	
其他特性	參數	值	單位	標準	註解
吸水率	24h / 96h (23°C)	0.05 / 0.1	%	DIN EN ISO 62	1) (1) Ø ca. 50mm, h=13mm
耐熱水/鹼		+		-	2) (2) + good resistance
耐候性		-		-	3) (3) - poor resistance
耐燃性(UL94)	corresponding to	V0		DIN IEC 60695-11-10;	4) (4) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.

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