

TECAPEEK MT CLASSIX white - 型材 (棒材, 板材, 管件)

化學命名

PEEK (聚醚醚酮)

顏色

奶油 / 白色 不透明

密度

1.4 g/cm³

主要特色

- 優異的耐化學性
- 良好的尺寸穩定性
- 生物相容性
- 良好的滑動及耐磨特性
- 耐水解和熱蒸氣
- 高能輻射抗性
- 高強度

目標產業

- 醫療科技

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	117	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
彈性模數 (張力測試)	1mm/min	4700	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	117	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
降伏點伸長率	50mm/min	5	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
斷裂伸長率	50mm/min	11	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
抗彎強度	2mm/min, 10 N	177	MPa	DIN EN ISO 178	2) (6) Specimen in 4mm thickness
彈性模數 (彎曲測試)	2mm/min, 10 N	4400	MPa	DIN EN ISO 178	n.b. = not broken
壓縮強度	1% / 2% / 5% 5mm/min, 10 N	25/45/105	MPa	EN ISO 604	3)
壓縮模數	5mm/min, 10 N	3500	MPa	EN ISO 604	4)
衝擊強度(Charpy)	max. 7,5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU	5)
缺口衝擊強度(Charpy)	max. 7,5J	5	kJ/m ²	DIN EN ISO 179-1eA	
球壓式硬度		263	MPa	ISO 2039-1	6)
熱特性	參數	值	單位	標準	註解
玻璃轉化溫度		150	°C	DIN EN ISO 11357	1) (1) Found in public sources.
熔化溫度		341	°C	DIN EN ISO 11357	(2) Found in public sources.
使用溫度	short term	300	°C		2) Individual testing regarding application conditions is mandatory.
使用溫度	long term	260	°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.	7	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
比熱		1.0	J/(g*K)	ISO 22007-4:2008	
導熱係數		0.30	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	DIN IEC 60093	
體積電阻		10 ¹⁴	Ω*cm	DIN IEC 60093	
其他特性	參數	值	單位	標準	註解
吸水率	24h / 96h (23°C)	0.02 / 0.03	%	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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