

TECAPEEK natural - 型材(棒材,板材,管件)

化學命名
PEEK (聚醚醚酮)

顏色
米黃色 不透明

密度
1.31 g/cm³

- 主要特色**
- 良好的熱變形溫度
 - 良好的加工特性
 - 固有的防火性
 - 高能輻射抗性
 - 良好的滑動及耐磨特性
 - 優異的耐化學性
 - 高蠕變抗性
 - 耐水解和熱蒸氣

- 目標產業**
- 化學技術
 - 機械工程
 - 食品科技
 - 電子學
 - 能源工業
 - 石油和天然氣工業
 - 航空與航太科技
 - 汽車工業
 - 半導體科技
 - 真空科技

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	116	MPa	DIN EN ISO 527-2	
彈性模數 (張力測試)	1mm/min	4200	MPa	DIN EN ISO 527-2	1)
降伏點抗拉強度	50mm/min	116	MPa	DIN EN ISO 527-2	
降伏點伸長率	50mm/min	5	%	DIN EN ISO 527-2	
斷裂伸長率	50mm/min	15	%	DIN EN ISO 527-2	
抗彎強度	2mm/min, 10 N	175	MPa	DIN EN ISO 178	2)
彈性模數 (彎曲測試)	2mm/min, 10 N	4200	MPa	DIN EN ISO 178	
壓縮強度	1% / 2% / 5% 5mm/min, 10 N	23/43/102	MPa	EN ISO 604	3)
壓縮模數	5mm/min, 10 N	3400	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	4	kJ/m ²	DIN EN ISO 179-1eA	
蕭氏硬度	D	89		DIN EN ISO 868	
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)
熔化溫度		341	°C	DIN EN ISO 11357	
熱變形溫度	HDT, Method A	162	°C	ISO-R 75 Method A	
使用溫度	short term	300	°C		2)
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	1.1	J/(g*K)		ISO 22007-4:2008	
導熱係數	0.27	W/(K*m)		ISO 22007-4:2008	
電性特性	參數	值	單位	標準	註解
表面電阻	Silver electrode, 23°C, 12% r.h.	10 ¹⁵	Ω	-	1)
體積電阻	Silver electrode, 23°C, 12% r.h.	10 ¹⁵	Ω*cm	DIN IEC 60093	(1) Specimen in 20mm thickness (2) Specimen in 1mm thickness
介電強度	23°C, 50% r.h.	73	kV/mm	ISO 60243-1	2)
耐電痕(CTI)	Platin electrode, 23°C, 50% r.h., solvent A	125	V	DIN EN 60112	
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 (2) + good resistance (3) - poor resistance
耐熱水/鹼		+	-		2)
耐候性		-	-		3)
耐燃性(UL94)	listed (value at 1.5mm)	V0		DIN IEC 60695-11-10;	

→ TECAPEEK產品使用Victrex®PEEK 450或Solvay KetaSpire®製成

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