

## TECAPEEK black - 型材 (棒材, 板材, 管件)

### 化學命名

PEEK (聚醚醚酮)

### 顏色

黑色 不透明

### 密度

1.31 g/cm<sup>3</sup>

### 主要特色

- 良好的熱變形溫度
- 固有的防火性
- 高能輻射抗性
- 高強度
- 良好的耐化學性
- 高蠕變抗性
- 耐水解和熱蒸氣

### 目標產業

- 化學技術
- 機械工程
- 電子學
- 真空科技
- 汽車工業
- 航空與航太科技

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	100	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
彈性模數 (張力測試)	1mm/min	4100	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	100	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
降伏點伸長率	50mm/min	3	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
斷裂伸長率	50mm/min	3	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
抗彎強度	2mm/min, 10 N	171	MPa	DIN EN ISO 178	(2)
彈性模數 (彎曲測試)	2mm/min, 10 N	4100	MPa	DIN EN ISO 178	
壓縮強度	1% / 2% / 5% 5mm/min, 10 N	22/41/95	MPa	EN ISO 604	(3)
壓縮模數	5mm/min, 10 N	3300	MPa	EN ISO 604	(4)
衝擊強度(Charpy)	max. 7.5J	75	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	(5)
蕭氏硬度	D	87		DIN EN ISO 868	
熱特性	參數	值	單位	標準	註解
玻璃轉化溫度		151	°C	DIN EN ISO 11357	(1)
熔化溫度		341	°C	DIN EN ISO 11357	(2) Found in public sources. Individual testing regarding application conditions is mandatory.
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 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
熱膨脹 (CLTE)	23-100°C, long.	5	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
熱膨脹 (CLTE)	100-150°C, long.	7	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
比熱		1.1	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 <sup>12</sup>	Ω	-	(1) Due to the black colourant and moisture uptake of the material the electrical insulation properties cannot be 100% guaranteed, despite single measurements suggesting otherwise.
體積電阻		10 <sup>12</sup>	Ω*cm	DIN EN 61340-2-3	(1)
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 (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.
耐熱水/鹼		+	-	-	(2)
耐候性		-	-	-	(3)
耐燃性(UL94)	corresponding to	V0		DIN IEC 60695-11-10;	(4)

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

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