

## TECAPEEK CMP 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/cm<sup>3</sup>

### 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
- 耐水解和熱蒸氣
- 高能輻射抗性
- 良好的滑動及耐磨特性
- 高韌性
- 高蠕變抗性

### 目標產業

- 半導體科技

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	110	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	(2) For flexural test: support span 64mm, norm specimen.
降伏點抗拉強度	50mm/min	110	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
降伏點伸長率	50mm/min	4	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
斷裂伸長率	50mm/min	50	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken
抗彎強度	2mm/min, 10 N	160	MPa	DIN EN ISO 178	(6) Specimen in 4mm thickness
彈性模數 (彎曲測試)	2mm/min, 10 N	3900	MPa	DIN EN ISO 178	
壓縮強度	1% / 2% 5mm/min, 10 N	15 / 34	MPa	EN ISO 604	
壓縮模數	5mm/min, 10 N	3200	MPa	EN ISO 604	
衝擊強度 (Charpy)	max. 7,5J	n.b.	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	
缺口衝擊強度 (Izod)		4	kJ/m <sup>2</sup>	DIN EN ISO 179-1eA	
球壓式硬度		240	MPa	ISO 2039-1	
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) Found in public sources. Individual testing regarding application conditions is mandatory.
熔化溫度		340	°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		(1)
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.	6	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		0.27	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 <sup>15</sup>	Ω	DIN IEC 60093	(1) Specimen in 20mm thickness
體積電阻	Silver electrode, 23°C, 12% r.h.	10 <sup>15</sup>	Ω*cm	DIN IEC 60093	(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) Ø ca. 50mm, h=13mm (2) + good resistance (3) - poor resistance
耐熱水/鹼		+	-	-	(2)
耐候性		-	-	-	(3)

→ TECAPEEK 產品是使用 Victrex® PEEK 原物料製作而成。

Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values that can be used primarily for comparison purposes for material selection. These values are within the normal tolerance range of product properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. Unless otherwise noted, these values were determined by tests at reference dimensions (typically rods with diameter 40-60 mm according to DIN EN 15860) on extruded and machined specimen. As the properties depend on the dimensions of the semi-finished products and the orientation in the component (esp. in reinforced grades), the material may not be used without a separate testing under individual circumstances. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at [www.ensingerplastics.com](http://www.ensingerplastics.com). Technical changes reserved.