

## TECATRON natural - 型材 (棒材, 板材, 管件)

### 化學命名

PPS (聚苯硫醚)

### 顏色

米黃色 不透明

### 密度

1.36 g/cm<sup>3</sup>

### 主要特色

- 良好的熱變形溫度
- 良好的耐化學性
- 高能輻射抗性
- 高強度
- 良好的尺寸穩定性
- 高剛性
- 高蠕變抗性

### 目標產業

- 航空與航太科技
- 電子學
- 機械工程
- 石油和天然氣工業
- 半導體科技
- 真空科技
- 化學技術

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	103	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	103	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
降伏點伸長率	50mm/min	6,5	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
斷裂伸長率	50mm/min	6,5	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
抗彎強度	2mm/min, 10 N	166	MPa	DIN EN ISO 178	(2)
彈性模數 (彎曲測試)	2mm/min, 10 N	3800	MPa	DIN EN ISO 178	
壓縮強度	1% / 2% / 5% 5mm/min, 10 N	27/56/134	MPa	EN ISO 604	(3)
壓縮模數	5mm/min, 10 N	2860	MPa	EN ISO 604	(4)
衝擊強度(Charpy)	max. 7,5J	80	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	(5)
缺口衝擊強度(Charpy)	max. 7,5J	2,6	kJ/m <sup>2</sup>	DIN EN ISO 179-1eA	
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		97	°C	DIN EN ISO 11357	(1) (1) Found in public sources.
熔化溫度		281	°C	DIN EN ISO 11357	(2) Found in public sources.
使用溫度	short term	260	°C		(2) Individual testing regarding application conditions is mandatory.
使用溫度	long term	230	°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.	11	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
比熱		1.0	J/(g*K)	ISO 22007-4:2008	
導熱係數		0.25	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>14</sup>	Ω	DIN IEC 60093	(1) Specimen in 1.6mm thickness
體積電阻		10 <sup>14</sup>	Ω*cm	DIN IEC 60093	based on raw material data
介電強度		24	kV/mm	ASTM D 149	(1) (2) based on raw material data
耐電痕(CTI)		150		IEC 60112	(2)
其他特性	參數	值	單位	標準	註解
吸水率	24h / 96h (23°C)	<0.01 / 0.01	%	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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