

## 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)
熔化溫度		281	°C	DIN EN ISO 11357	(2) Found in public sources. Individual testing regarding application conditions is mandatory.
使用溫度	short term	260	°C		(2)
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)
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 (2) + good resistance
耐熱水/鹼		+		-	(2) (3) - poor resistance
耐候性		-		-	(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.
耐燃性(UL94)	corresponding to	V0		DIN IEC 60695-11-10;	(4)

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