

TECAMID 6 natural - 型材 (棒材, 板材, 管件)

化學命名

PA 6 (聚醯胺 6)

顏色

象牙色 不透明

密度

1.14 g/cm³

加工後所產生的數據(依德國標準氣候為主)。

主要特色

- 高韌性
- 耐油、潤滑油及燃油
- 電絕緣
- 良好的磨損性
- 良好的可焊接性和黏結性
- 良好的滑動及耐磨特性
- 高強度
- 良好的加工特性

目標產業

- 機械工程
- 航空與航太科技
- 電子學
- 食品科技
- 汽車工業

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	79	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
彈性模數 (張力測試)	1mm/min	3300	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
降伏點抗拉強度	50mm/min	78	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	130	%	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	100	MPa	DIN EN ISO 178	
彈性模數 (彎曲測試)	2mm/min, 10 N	2900	MPa	DIN EN ISO 178	
壓縮強度	1% / 2% / 5% 5mm/min, 10 N	24/41/86	MPa	EN ISO 604	
壓縮模數	5mm/min, 10 N	2700	MPa	EN ISO 604	
衝擊強度(Charpy)	max. 7.5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU	
缺口衝擊強度(Charpy)	max. 7.5J	7	kJ/m ²	DIN EN ISO 179-1eA	
蕭氏硬度	D	79		DIN EN ISO 868	
熱特性	參數	值	單位	標準	註解
玻璃轉化溫度		45	°C	DIN EN ISO 11357	(1) Found in public sources.
熔化溫度		221	°C	DIN EN ISO 11357	(2) Found in public sources. Individual testing regarding application conditions is mandatory.
使用溫度	short term	160	°C		
使用溫度	long term	100	°C		
熱膨脹 (CLTE)	23-60°C, long.	12	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
熱膨脹 (CLTE)	23-100°C, long.	13	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
比熱		1.6	J/(g*K)	ISO 22007-4:2008	
導熱係數		0.37	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 ¹⁴	Ω	-	(1) Specimen in 20mm thickness
體積電阻	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω*cm	-	(2) Specimen in 1mm thickness
介電強度	23°C, 50% r.h.	31	kV/mm	ISO 60243-1	
耐電痕(CTI)	Platin electrode, 23°C, 50% r.h., solvent A	600	V	DIN EN 60112	
其他特性	參數	值	單位	標準	註解
吸水率	24h / 96h (23°C)	0.3 / 0.6	%	DIN EN ISO 62	(1) Ø ca. 50mm, h=13mm
耐熱水/鹼		(+)	-	-	(2) (+) limited resistance
耐候性		-	-	-	(3) - poor resistance
耐燃性(UL94)	corresponding to	HB		DIN IEC 60695-11-10;	(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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