

TECAMID 6 GF30 black - 型材 (棒材, 板材, 管件)

化學命名

PA 6 (聚醯胺 6)

顏色

黑色 不透明

密度

1.36 g/cm³

添加物

玻璃纖維

加工後所產生的數據(依德國標準氣候為主)。

主要特色

- 極高的強度
- 耐油、潤滑油及燃油
- 良好的磨損性
- 良好的可焊接性和黏結性
- 良好的尺寸穩定性
- 良好的熱變形溫度
- 良好的加工特性

目標產業

- 機械工程
- 電子學
- 汽車工業

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	98	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
彈性模數 (張力測試)	1mm/min	5700	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
降伏點抗拉強度	50mm/min	98	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	5	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
抗彎強度	2mm/min, 10 N	140	MPa	DIN EN ISO 178	(6) Specimen in 4mm thickness
彈性模數 (彎曲測試)	2mm/min, 10 N	5200	MPa	DIN EN ISO 178	
壓縮強度	1% / 2% / 5% 5mm/min, 10 N	21/42/107	MPa	EN ISO 604	
壓縮模數	5mm/min, 10 N	4200	MPa	EN ISO 604	
衝擊強度(Charpy)	max. 7,5J	60	kJ/m ²	DIN EN ISO 179-1eU	
球壓式硬度		232	MPa	ISO 2039-1	
熱特性	參數	值	單位	標準	註解
玻璃轉化溫度		49	°C	DIN EN ISO 11357	(1) Found in public sources.
熔化溫度		218	°C	DIN EN ISO 11357	(2) Found in public sources.
使用溫度	short term	180	°C		Individual testing regarding application conditions is mandatory.
使用溫度	long term	100	°C		
熱膨脹 (CLTE)	23-60°C, long.	6	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
熱膨脹 (CLTE)	23-100°C, long.	6	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
比熱		1.3	J/(g*K)	ISO 22007-4:2008	
導熱係數		0.41	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	DIN IEC 60093	(1) Specimen in 20mm thickness
體積電阻	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω*cm	DIN IEC 60093	(2) Due to the black colourant and moisture uptake of the material the electrical insulation properties cannot be 100% guaranteed, despite single measurements suggesting otherwise.
介電強度	23°C, 50% r.h.	32	kV/mm	ISO 60243-1	(3) Specimen in 1mm thickness
耐電痕(CTI)	Platin electrode, 23°C, 50% r.h., solvent A	550 / 475	V	DIN EN 60112	
其他特性	參數	值	單位	標準	註解
吸水率	24h / 96h (23°C)	0.2 / 0.3	%	DIN EN ISO 62	(1) Ø ca. 50mm, h=13mm
耐熱水/鹼		(+)		-	(2) (+) limited resistance
耐候性		(+)			(3) Corresponding means no listing at UL (yellow card).
耐燃性(UL94)	corresponding to	HB		DIN IEC 60695-11-10;	The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.

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