

TECAPET black - 型材 (棒材, 板材, 管件)

化學命名

PET (聚對苯二甲酸乙二酯)

顏色

黑色 不透明

密度

1.39 g/cm³

主要特色

- 良好的耐化學性
- 極高的強度
- 易於研磨
- 良好的可焊接性和黏結性
- 良好的滑動及耐磨特性
- 良好的加工特性
- 高韌性

目標產業

- 機械工程
- 汽車工業
- 電子學
- 食品科技

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	91	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
彈性模數 (張力測試)	1mm/min	3400	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
降伏點抗拉強度	50mm/min	91	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	15	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
抗彎強度	2mm/min, 10 N	134	MPa	DIN EN ISO 178	2)
彈性模數 (彎曲測試)	2mm/min, 10 N	3400	MPa	DIN EN ISO 178	
壓縮強度	1% / 2% / 5% 5mm/min, 10 N	19/36/86	MPa	EN ISO 604	3)
壓縮模數	5mm/min, 10 N	2800	MPa	EN ISO 604	4)
衝擊強度(Charpy)	max. 7.5J	35	kJ/m ²	DIN EN ISO 179-1eU	5)
蕭氏硬度	D	85		DIN EN ISO 868	
熱特性	參數	值	單位	標準	註解
玻璃轉化溫度		81	°C	DIN EN ISO 11357	1)
熔化溫度		244	°C	DIN EN ISO 11357	
使用溫度	short term	170	°C		2)
使用溫度	long term	110	°C		
熱膨脹 (CLTE)	23-60°C, long.	8	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
熱膨脹 (CLTE)	23-100°C, long.	10	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
電性特性	參數	值	單位	標準	註解
表面電阻		10 ¹⁴	Ω	-	(1) Due to the black colourant and moisture uptake of the material the electrical insulation properties cannot be 100% guaranteed, despite single measurements suggesting otherwise.
體積電阻		10 ¹⁴	Ω*cm	-	1)
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) (1) Ø ca. 50mm, h=13mm (2) - poor resistance (3) (+)limited resistance (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.
耐熱水/鹼		-	-	-	2)
耐候性		(+)	-	-	3)
耐燃性(UL94)	corresponding to	HB	-	DIN IEC 60695-11-10;	4)

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