

TECAST L black - 型材 (棒材, 板材, 管件)

化學命名

PA 6 C (澆鑄聚醯胺 6)

顏色

黑色 不透明

密度

1.14 g/cm³

添加物

油

加工後所產生的數據(依德國標準氣候為主)。

主要特色

- 良好的滑動及耐磨特性
- 高韌性
- 良好的磨損性
- 耐油、潤滑油及燃油
- 高強度

目標產業

- 機械工程
- 汽車工業
- 重工業

機械特性	參數	值	單位	標準	註解
抗拉強度	50mm/min	70	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
彈性模數 (張力測試)	1mm/min	3100	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
降伏點抗拉強度	50mm/min	68	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	50	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
抗彎強度	2mm/min, 10 N	95	MPa	DIN EN ISO 178	n.b. = not broken
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	21/37/78	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	5	kJ/m ²	DIN EN ISO 179-1eA	
蕭氏硬度	D	80		DIN EN ISO 868	
熱特性	參數	值	單位	標準	註解
玻璃轉化溫度		42	°C	DIN EN ISO 11357	(1) Found in public sources.
熔化溫度		216	°C	DIN EN ISO 11357	(2) Found in public sources.
使用溫度	short term	170	°C		Individual testing regarding application conditions is mandatory.
使用溫度	long term	100	°C		
熱膨脹 (CLTE)	23-60°C, long.	13	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		1.7	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	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.	21	kV/mm	ISO 60243-1	(3) Specimen in 1mm thickness
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)	0.2 / 0.4	%	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). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
耐燃性(UL94)	corresponding to	HB		DIN IEC 60695-11-10;	

Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values that can be used primarily for comparison purposes for material selection. These values are within the normal tolerance range of product properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. Unless otherwise noted, these values were determined by tests at reference dimensions (typically rods with diameter 40-60 mm according to DIN EN 15860) on cast and machined specimen. As the properties depend on the dimensions of the semi-finished products and the orientation in the component (esp. in reinforced grades), the material may not be used without a separate testing under individual circumstances. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at www.ensinger-online.com. Technical changes reserved.