

TECAPEEK PVX black - 型材 (棒材, 板材, 管件)

化學命名

PEEK (聚醚醚酮)

顏色

黑色 不透明

密度

1.44 g/cm³

添加物

碳纖維, 鐵氟龍, 石墨

主要特色

- 良好的熱變形溫度
- 高蠕變抗性
- 良好的滑動及耐磨特性
- 耐水解和熱蒸氣
- 良好的磨損性
- 固有的防火性
- 優異的耐化學性

目標產業

- 機械工程
- 化學技術
- 能源工業
- 汽車工業
- 航空與航太科技

| 機械特性 | 參數 | 值 | 單位 | 標準 | 註解 |
|--------------|-----------------------------------|------------------------------------|----------------------------------|----------------------|---|
| 抗拉強度 | 50mm/min | 84 | MPa | DIN EN ISO 527-2 | (1) For tensile test: specimen type 1b |
| 彈性模數 (張力測試) | 1mm/min | 5500 | 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 | 84 | MPa | DIN EN ISO 527-2 | (3) Specimen 10x10x10mm |
| 降伏點伸長率 | 50mm/min | 3 | % | DIN EN ISO 527-2 | (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. |
| 斷裂伸長率 | 50mm/min | 3 | % | DIN EN ISO 527-2 | (5) For Charpy test: support span 64mm, norm specimen. |
| 抗彎強度 | 2mm/min, 10 N | 142 | MPa | DIN EN ISO 178 | (2) |
| 彈性模數 (彎曲測試) | 2mm/min, 10 N | 6000 | MPa | DIN EN ISO 178 | |
| 壓縮強度 | 1% / 2% / 5% 5mm/min, 10 N | 22/43/102 | MPa | EN ISO 604 | (3) |
| 壓縮模數 | 5mm/min, 10 N | 4000 | MPa | EN ISO 604 | (4) |
| 衝擊強度(Charpy) | max. 7,5J | 28 | kJ/m ² | DIN EN ISO 179-1eU | (5) |
| 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 | | 146 | °C | DIN EN ISO 11357 | (1) |
| 熔化溫度 | | 341 | °C | DIN 53765 | |
| 使用溫度 | short term | 300 | °C | | (2) |
| 使用溫度 | long term | 260 | °C | | |
| 熱膨脹 (CLTE) | 23-60°C, long. | 3 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| 熱膨脹 (CLTE) | 23-100°C, long. | 3 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| 熱膨脹 (CLTE) | 100-150°C, long. | 4 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| 比熱 | | 1.1 | J/(g*K) | ISO 22007-4:2008 | |
| 導熱係數 | | 0.82 | W/(K*m) | ISO 22007-4:2008 | |
| 電性特性 | 參數 | 值 | 單位 | 標準 | 註解 |
| 表面電阻 | Conductive rubber, 23°C, 12% r.h. | 10 ⁴ - 10 ¹¹ | Ω | DIN EN 61340-2-3 | (1) (1) Specimen in 20mm thickness |
| 體積電阻 | Conductive rubber, 23°C, 12% r.h. | 10 ⁷ - 10 ¹² | Ω*cm | DIN EN 61340-2-3 | |
| 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) + good resistance (3) - poor resistance |
| 耐熱水/鹼 | | + | - | - | (2) (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. |
| 耐候性 | | - | - | - | (3) |
| 耐燃性(UL94) | corresponding to | V0 | | DIN IEC 60695-11-10; | (4) |

→ TECAPEEK產品使用Victrex®PEEK 450或Solvay KetaSpire®製成

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