

TECANYL 731 grey - 型材 (棒材, 板材, 管件)

化學命名

PPE (聚苯醚)

顏色

灰色 不透明

密度

1.1 g/cm³

主要特色

- 高強度
- 電絕緣
- 高韌性
- 良好的可焊接性和黏結性
- 對壓力破裂敏感

目標產業

- 機械工程
- 電子學
- 能源工業
- 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 | 57 | MPa | DIN EN ISO 527-2 | (1) For tensile test: specimen type 1b |
| 彈性模數 (張力測試) | 1mm/min | 2400 | 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 | 57 | MPa | DIN EN ISO 527-2 | (3) Specimen 10x10x10mm |
| 降伏點伸長率 | 50mm/min | 15 | % | DIN EN ISO 527-2 | (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. |
| 斷裂伸長率 | 50mm/min | 22 | % | DIN EN ISO 527-2 | (5) For Charpy test: support span 64mm, norm specimen. |
| 抗彎強度 | 2mm/min, 10 N | 85 | MPa | DIN EN ISO 178 | 2) (6) Specimen in 4mm thickness |
| 彈性模數 (彎曲測試) | 2mm/min, 10 N | 2500 | MPa | DIN EN ISO 178 | |
| 壓縮強度 | 1% / 2% / 5% 5mm/min, 10 N | 18/33/74 | MPa | EN ISO 604 | 3) |
| 壓縮模數 | 5mm/min, 10 N | 2100 | MPa | EN ISO 604 | 4) |
| 衝擊強度(Charpy) | max. 7.5J | 69 | kJ/m ² | DIN EN ISO 179-1eU | 5) |
| 球壓式硬度 | | 146 | MPa | ISO 2039-1 | 6) |
| 熱特性 | 參數 | 值 | 單位 | 標準 | 註解 |
| 玻璃轉化溫度 | | 145 | °C | DIN EN ISO 11357 | 1) (1) Found in public sources. |
| 熔化溫度 | | n.a. | °C | DIN EN ISO 11357 | 2) (2) n.a. = not applicable |
| 使用溫度 | short term | 110 | °C | | 3) (3) Found in public sources. |
| 使用溫度 | long term | 85 | °C | | Individual testing regarding application conditions is mandatory. |
| 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. | 8 | 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 | | 0.21 | W/(K*m) | ISO 22007-4:2008 | |
| 電性特性 | 參數 | 值 | 單位 | 標準 | 註解 |
| 表面電阻 | | 10 ¹⁴ | Ω | - | |
| 體積電阻 | | 10 ¹⁴ | Ω*cm | - | |
| 其他特性 | 參數 | 值 | 單位 | 標準 | 註解 |
| 吸水率 | 24h / 96h (23°C) | 0.02 / 0.04 | % | DIN EN ISO 62 | 1) (1) Ø ca. 50mm, h=13mm |
| 耐熱水/鹼 | | (+) | - | - | 2) (2) (+) limited resistance |
| 耐候性 | | - | - | - | 3) (3) - poor resistance |
| 耐燃性(UL94) | corresponding to | HB | - | DIN IEC 60695-11-10; | 4) (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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