

TECAMID 66 MO black - 型材 (棒材, 板材, 管件)

化學命名

PA 66 (聚醯胺 66)

顏色

黑色 不透明

密度

1.15 g/cm³

添加物

二硫化鋁

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
- 高剛性
- 耐油、潤滑油及燃油
- 良好的可焊接性和黏結性
- 高強度
- 良好的磨損性
- 高韌性

目標產業

- 機械工程
- 航空與航太科技
- 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 | 84 | MPa | DIN EN ISO 527-2 | (1) For tensile test: specimen type 1b |
| 彈性模數 (張力測試) | 1mm/min | 3200 | 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 | 83 | MPa | DIN EN ISO 527-2 | (3) Specimen 10x10x10mm |
| 降伏點伸長率 | 50mm/min | 10 | % | DIN EN ISO 527-2 | (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. |
| 斷裂伸長率 | 50mm/min | 40 | % | DIN EN ISO 527-2 | (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken |
| 抗彎強度 | 2mm/min, 10 N | 114 | MPa | DIN EN ISO 178 | 2) |
| 彈性模數 (彎曲測試) | 2mm/min, 10 N | 3100 | MPa | DIN EN ISO 178 | |
| 壓縮強度 | 1% / 2% / 5% 5mm/min, 10 N | 20/38/86 | MPa | EN ISO 604 | 3) |
| 壓縮模數 | 5mm/min, 10 N | 2700 | MPa | EN ISO 604 | 4) |
| 衝擊強度(Charpy) | max. 7.5J | n.b. | kJ/m ² | DIN EN ISO 179-1eU | 5) |
| 缺口衝擊強度(Charpy) | max. 7.5J | 5 | kJ/m ² | DIN EN ISO 179-1eA | |
| 蕭氏硬度 | D | 81 | | DIN EN ISO 868 | |
| 熱特性 | 參數 | 值 | 單位 | 標準 | 註解 |
| 玻璃轉化溫度 | | 52 | °C | DIN EN ISO 11357 | 1) (1) Found in public sources. |
| 熔化溫度 | | 253 | °C | DIN EN ISO 11357 | (2) Found in public sources. Individual testing regarding application conditions is mandatory. |
| 使用溫度 | short term | 170 | °C | | 2) |
| 使用溫度 | long term | 100 | °C | | |
| 熱膨脹 (CLTE) | 23-60°C, long. | 10 | 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 | |
| 比熱 | | 1.5 | J/(g*K) | ISO 22007-4:2008 | |
| 導熱係數 | | 0.36 | 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 | - | 1) (1) Specimen in 20mm thickness |
| 體積電阻 | Silver electrode, 23°C, 12% r.h. | 10 ¹⁴ | Ω*cm | - | 2) (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. | 35 | kV/mm | ISO 60243-1 | 3) (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) (1) Ø ca. 50mm, h=13mm |
| 耐熱水/鹼 | | (+) | | - | 2) (2) (+) limited resistance |
| 耐候性 | | (+) | | | 3) (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. |
| 可燃性(UL94) | corresponding to | HB | | DIN IEC 60695-11-10; | 3) |

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