

TECASINT 5051 grey-green - halvfabrikat

Kemisk beteckning

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Färg

Mörk brun

Densitet

1.56 g/cm³

Fillers

glas fibrer

Huvud egenskaper

- hög termisk och mekanisk kapacitet
- mycket bra elektrisk isolering
- bra slitenskaper
- låg termisk expansion
- motstånd mot hög energi strålning
- högt krypmotstånd
- känslig för hydrolys i högre termiska intervall

Målindustrier

- halvledarteknik
- elektronik
- maskinteknik
- kryogenteknik

| Mekaniska Egenskaper | parameter | värde | enhet | norm | anmärkning |
|----------------------------------|---------------------|----------------------|----------------------------------|----------------------|---|
| Draghållfasthet | 50 mm/min | 110 | MPa | DIN EN ISO 527-1 | (1) eU |
| Elasticitetsmodul (dragprov) | 1 mm/min | 6500 | MPa | DIN EN ISO 527-1 | |
| Brottförlängning | 50 mm/min | 2.2 | % | DIN EN ISO 527-1 | |
| Böjhållfasthet | 10 mm/min | 162 | MPa | DIN EN ISO 178 | |
| Elasticitetsmodul (böjningstest) | 2 mm/min | 6600 | MPa | DIN EN ISO 178 | |
| Brottförlängning (böjtest) | 10 mm/min | 2.6 | % | DIN EN ISO 178 | |
| Kompressionsstyrka | 10 mm/min | 260 | MPa | EN ISO 604 | |
| tryckhållfasthet vid brott | 10 mm/min | 20 | % | EN ISO 604 | |
| Kompressionsmodul | 1 mm/min | 3000 | MPa | EN ISO 604 | |
| slagstyrka (charpy) | max 7.5 J | 20 | kJ/m ² | DIN EN ISO 179-1 | 1) |
| Shore hårdhet | Shore D | 92 | | DIN EN ISO 868 | |
| Värmeledningsförmåga | parameter | värde | enhet | norm | anmärkning |
| Glasövergångstemperatur | | 330 | °C | - | 1) |
| värmeförvrängning temperatur | 1,8 MPa | 344 | °C | DIN 53 461 | (1) DMA, maximum loss factor tan d |
| termisk expansion | 23-100°C | 2.8 / - | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | 2) Thermal expansion XY/Z axis |
| termisk expansion | 100-150°C | 2.8 / - | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | 3) Thermal expansion XY/Z axis |
| termisk expansion | 50-200°C | 2.8 / - | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | 4) Thermal expansion XY/Z axis |
| Specifik värme | | 1.04 | J/(g*K) | DIN EN 821 | |
| Värmeledningsförmåga | 40°C | 0.3 | W/(K*m) | DIN EN 821 | |
| Elektriska egenskaper | parameter | värde | enhet | norm | anmärkning |
| Specifikt ytmotstånd | 23°C | > 10 ¹⁴ | Ω | DIN EN 61340-2-3 | |
| Specifikt volymresistans | 23°C | > 10 ¹⁴ | Ω*cm | DIN EN 61340-2-3 | |
| Elektrisk styrka DC | | 24 | kV*mm ⁻¹ | ISO 60243-1 | |
| Dielektrisk förlustfaktor | 50 Hz | 3,2*10 ⁻² | | DIN 53483-1 | |
| Dielektrisk förlustfaktor | 1 kHz | 2,2*10 ⁻³ | | DIN 53483-1 | |
| Dielektrisk förlustfaktor | 1 MHz | 1,1*10 ⁻² | | DIN 53483-1 | |
| Dielektrisk konstant | 50 Hz | 3.0 | | DIN 53483-1 | |
| Dielektrisk konstant | 1 kHz | 2.9 | | DIN 53483-1 | |
| Dielektrisk konstant | 1 MHz | 2.9 | | DIN 53483-1 | |
| Övriga egenskaper | parameter | värde | enhet | norm | anmärkning |
| Vatten absorption | 24 h in water, 23°C | 0.48 | % | DIN EN ISO 62 | (1) 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. |
| Brandklassning (UL94) | corresponding to | V0 | | DIN IEC 60695-11-10; | 1) |

→ TECASINT 5000 series show significant water uptake. Parts have to be pre-dried before fast heating to above 200 °C (drying process: 2 h per 3 mm wall thickness at 150 °C).

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