

TECAPAI CM XP403 green - Stock Shapes (rods, plates, tubes)

Chemical Designation

PAI (Polyamide-imide)

Colour

green opaque

Density

1.41 g/cm³

Fillers

unreinforced

production process: compression moulding

Main features

- good wear properties
- excellent strength and stiffness
- excellent dimensional stability
- very good thermal stability
- excellent chemical resistance

Target Industries

- electronics
- aircraft and aerospace technology
- oil and gas industry
- chemical and refinery industry
- process engineering

| Mechanical properties | parameter | value | unit | norm | comment |
|---------------------------------------|-------------------------|------------|----------------------------------|----------------------|---|
| Modulus of elasticity (tensile test) | 1 mm/min | 3600 | MPa | DIN EN ISO 527-2 | 1) (1) For tensile test: specimen type 1b |
| Tensile strength at break | 5mm/min | 122 | MPa | DIN EN ISO 527-2 | (2) For flexural test: support span 64mm, norm specimen. |
| Elongation at break (tensile test) | 5mm/min | 8 | % | DIN EN ISO 527-2 | (3) Specimen 10x10x10mm |
| Flexural strength | 2mm/min, 10 N | 173 | MPa | DIN EN ISO 178 | 2) (4) For Charpy test: support span 64mm, norm specimen. |
| Modulus of elasticity (flexural test) | 2mm/min, 10 N | 3600 | MPa | DIN EN ISO 178 | (5) Specimen in 4mm thickness |
| Compression strength | 1% / 2% / 5% | 12/32/90 | MPa | EN ISO 604 | 3) |
| Impact strength (Charpy) | max. 7.5J | 81 | kJ/m ² | DIN EN ISO 179-1eU | 4) |
| Ball indentation hardness | | 221 | MPa | ISO 2039-1 | 5) |
| Shore hardness | D scale | 85 | | DIN EN ISO 868 | |
| Thermal properties | parameter | value | unit | norm | comment |
| Glass transition temperature | | 285 | °C | DIN EN ISO 11357 | |
| Thermal expansion (CLTE) | 23-60°C, longitudinal | 4,2 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| Thermal expansion (CLTE) | 23-100°C, longitudinal | 4,3 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| Thermal expansion (CLTE) | 100-150°C, longitudinal | 4,7 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| Electrical properties | parameter | value | unit | norm | comment |
| Dielectric strength | | 26 | kV/mm | ISO 60243-1 | 1) (1) Specimen in 1mm thickness |
| Dissipation factor | @ 1 MHz | 0,019 | Ω/sq | DIN 53 481 | |
| Dissipation factor | @ 100 Hz | 0,0055 | % | DIN 53 481 | |
| Dielectric constant | @ 1 MHz | 3,5 | | DIN 53 481 | |
| Dielectric constant | @ 100 Hz | 3,8 | | DIN 53 481 | |
| Other properties | parameter | value | unit | norm | comment |
| Moisture absorption | 24h / 96h (23°C) | 0,4 / 0,57 | % | DIN EN ISO 62 | |
| Flammability (UL94) | 3,2 mm | V0 | | - | |

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