

## TECAPAI CM XP730 black - Stock Shapes (rods, plates, tubes)

### Chemical Designation

PAI (Polyamide-imide)

### Colour

black opaque

### Density

1.47 g/cm<sup>3</sup>

### Fillers

carbon fibres

production process: compression moulding

### Main features

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

### Target Industries

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

| <i>Mechanical properties</i>          | <i>parameter</i>       | <i>value</i> | <i>unit</i>                      | <i>norm</i>          | <i>comment</i>  |
|---------------------------------------|------------------------|--------------|----------------------------------|----------------------|---|
| Modulus of elasticity (tensile test)  | 1mm/min                | 12100        | MPa                              | DIN EN ISO 527-2     | 1) (1) For tensile test: specimen type 1b<br>(2) For flexural test: support span 64mm, norm specimen. |
| Tensile strength at break             | 5mm/min                | 176          | MPa                              | DIN EN ISO 527-2     | (3) Specimen 10x10x10mm   |
| Elongation at break (tensile test)    | 5mm/min                | 2,8          | %                                | DIN EN ISO 527-2     | (4) For Charpy test: support span 64mm, norm specimen.  |
| Flexural strength                     | 2mm/min, 10 N          | 296          | MPa                              | DIN EN ISO 178       | 2) (5) Specimen in 4mm thickness  |
| Modulus of elasticity (flexural test) | 2mm/min, 10 N          | 9900         | MPa                              | DIN EN ISO 178       |   |
| Compression strength                  | 1% / 2% / 5%           | 18/46/136    | MPa                              | EN ISO 604           | 3)  |
| Impact strength (Charpy)              | max. 7,5J              | 50           | kJ/m <sup>2</sup>                | DIN EN ISO 179-1eU   | 4)  |
| Ball indentation hardness             |                        | 321          | MPa                              | ISO 2039-1           | 5)  |
| Shore hardness                        | D scale                | 94           |                                  | DIN EN ISO 868       |   |
| <i>Thermal properties</i>             | <i>parameter</i>       | <i>value</i> | <i>unit</i>                      | <i>norm</i>          | <i>comment</i>  |
| Glass transition temperature          |                        | 286          | °C                               | -                    |   |
| Thermal expansion (CLTE)              | 23-60°C, longitudinal  | 2,3          | 10 <sup>-5</sup> K <sup>-1</sup> | DIN EN ISO 11359-1;2 |   |
| Thermal expansion (CLTE)              | 23-100°C, longitudinal | 2,1          | 10 <sup>-5</sup> K <sup>-1</sup> | DIN EN ISO 11359-1;2 |   |
| <i>Other properties</i>               | <i>parameter</i>       | <i>value</i> | <i>unit</i>                      | <i>norm</i>          | <i>comment</i>  |
| Moisture absorption                   | 24h / 96h (23°C)       | 0,3 / 0,44   | %                                | DIN EN ISO 62        |   |
| Flammability (UL94)                   | 3,2 mm                 | V0           |                                  | -                    |   |

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