# TECAPEI™ CM ESD XP681 black - Stock Shapes (rods, plates, tubes)

**Chemical Designation**
PEI (Polyetherimide)

**Colour**
black

**Density**
1.32

**Fillers**
carbon based fillers

**Target Industries**
- chemical technology
- semiconductor technology

| Mechanical properties | condition | value | unit | test method | | comment |
|---|---|---|---|---|---|---|
| Modulus of elasticity (tensile test) | @73 F | 413,000 | psi | ASTM D 638 | 1) | (1) Type V specimen<br>(2) Type V specimen<br>(3) Type V specimen<br>(4) ASTM D732 |
| Tensile strength at break | @73 F | 11860 | psi | ASTM D 638 | 2) | |
| Elongation at break (tensile test) | @73 F | 4.4 | % | ASTM D 638 | 3) | |
| Flexural strength | @73 F | 15,220 | psi | ASTM D 790 | | |
| Modulus of elasticity (flexural test) | @73 F | 487,570 | psi | ASTM D 790 | | |
| Elongation at break (flexural test) | @73 F | 3.6 | % | ASTM D 790 | | |
| Compression strength | @1% strain | 3926 | psi | ASTM D 695 | | |
| Compression strength | @10% strain | 20,900 | psi | ASTM D 695 | | |
| Compression modulus | | 383,000 | psi | ASTM D 695 | | |
| Impact strength (Izod) | notched | 0.49 | ft-lbs/in | ASTM D 256 | | |
| Shore hardness | D scale | 84 | | ASTM D 2240 | | |
| Shear strength | @73 F | 9,677 | psi | - | 4) | |

| Thermal properties | condition | value | unit | test method | comment |
|---|---|---|---|---|---|
| Glass transition temperature | | 425 | °F | - | |

| Electrical properties | condition | value | unit | test method | comment |
|---|---|---|---|---|---|
| surface resistivity | @73 F | $10^6$-$10^9$ | Ω/square | ASTM D 257 | |

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