

QUANTUMCAST MATERIAL SPECIFICATIONS

AFP3100FR

Highlights

- Extremely durable, high-impact urethane with UL 94 flammability at 0.1 inch (2.6 mm)
- Meets FAR 25.853a Requirements per Appendix F, Part 1 (a1) (ii)
- Simulates ABS and PC/ABS
- Good heat resistance

Applications

- Ruggedized covers and skins for medical equipment, scientific instruments, consumer electronics, and electronic controllers
- Products requiring a UL 94 flammability rating

TYPICAL PHYSICAL PROPERTIES

| Property | Test Method | English | Metric |
|--|-------------|---------------------------|-----------------------|
| Color/Appearance | Visual | Translucent Off-White | Translucent Off-White |
| Compressive Modulus | ASTM D695 | 413,816 - 413,999 psi | 2,853 MPa |
| Compressive Strength | ASTM D695 | 15,360 psi | 106 MPa |
| Density | ASTM D792 | 0.0422 lb/in ³ | 1.17 gm/cc |
| Elongation at Break | ASTM D638 | 25% | 25% |
| Flexural Modulus | ASTM D790 | 424,275 psi | 2,925 MPa |
| Flexural Strength | ASTM D790 | 15,445 psi | 106 MPa |
| Heat Deflection Temperature @ 66 psi | ASTM D648 | 179°F | 82°C |
| Glass Transition Temperature E (onset) | ASTM D4065 | 176°F | 80°C |
| Glass Transition Temperature Tg (peak) | ASTM D4065 | 211°F | 99°C |
| Coefficient of Thermal Expansion | ASTM D696 | 6.00E-05 in/in/°F | - |
| Izod Impact Strength (method A, notched) | ASTM D256 | 1.60 ft-lb/in | 85 J/m |
| Shore D Hardness | ASTM D2240 | 85 D | 85 D |
| Tensile Modulus | ASTM D638 | 381,675 psi | 2,632 MPa |
| Tensile Strength | ASTM D638 | 10,650 psi | 73 MPa |
| Flammability per UL 94 Specification | UL 94 | UL File No. E238713 | - |

The material properties provided herein are for reference purposes only. Actual values may vary significantly as they are dramatically affected by part geometry and process parameters. Material specifications are subject to change with out notice.