

Momentive Performance Materials Type 219 Fused Quartz Tubing

Category : Ceramic , Glass , Oxide , Silicon Oxide

Material Notes:

Known as "Ozone-Free" or "Germicidal" quartz tubing. Transmits UV-A and UV-B while blocking the deep, high energy wavelengths that cause ozone generation and pose the greatest exposure risks. Transmits the 253.7 nm mercury emission very efficiently, making it an ideal material for disinfecting applications and various other UV treatments. Softening point 1660Å°C. Annealing point 1204Å°C. Strain point 1106Å°C. Data provided by GE Quartz. GE Quartz became a part of Momentive Performance Materials in 2006.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Momentive-Performance-Materials-Type-219-Fused-Quartz-Tubing.php

| Physical Properties | Metric | English | Comments |
|---------------------|-----------------------|---------------------------|----------|
| Density | 2.21 g/cc | 0.0798 lb/in ³ | |
| Viscosity | 5.60e+14 cP | 5.60e+14 cP | |
| | @Temperature 1100 Å°C | @Temperature 2010 Å°F | |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|-----------|-----------|-----------------------------|
| Knoop Microhardness | 570 | 570 | kg/mm ² |
| Hardness, Mohs | 5.5 - 6.5 | 5.5 - 6.5 | (Type 214) |
| Modulus of Elasticity | 75.0 GPa | 10900 ksi | Young's Modulus |
| Compressive Strength | 94.0 MPa | 13600 psi | design compressive strength |

| Thermal Properties | Metric | English | Comments |
|------------------------|-----------------------|-----------------------|----------|
| CTE, linear | 0.400 Åµm/m-Å°C | 0.222 Åµin/in-Å°F | |
| | @Temperature 20.0 Å°C | @Temperature 68.0 Å°F | |
| | 0.450 Åµm/m-Å°C | 0.250 Åµin/in-Å°F | |
| | @Temperature 1000 Å°C | @Temperature 1830 Å°F | |
| | 0.600 Åµm/m-Å°C | 0.333 Åµin/in-Å°F | |
| | @Temperature 500 Å°C | @Temperature 932 Å°F | |
| | 0.700 Åµm/m-Å°C | 0.389 Åµin/in-Å°F | |
| | @Temperature 250 Å°C | @Temperature 482 Å°F | |
| Specific Heat Capacity | 0.700 J/g-Å°C | 0.167 BTU/lb-Å°F | |
| | @Temperature 0.000 - | @Temperature 32.0 - | |

| Thermal Properties | 50.0 °C Metric | 122 °F English | Comments |
|----------------------|-------------------|--|----------|
| Thermal Conductivity | 1.40 W/m-K | 9.72 BTU-in/hr-ft ² - °F | |
| Softening Point | 1660 °C | 3020 °F | |
| Annealing Point | 1204 °C | 2199 °F | |
| Strain Point | 1106 °C | 2023 °F | |

| Optical Properties | Metric | English | Comments |
|-----------------------|--|--|---|
| Refractive Index | 1.456 | 1.456 | |
| Transmission, Visible | 92 % | 92 % | Entire visible spectrum; 1 mm thickness (includes surface reflection losses) |
| IR Transmittance | 93 % @Wavelength <=2500 nm, Thickness 1.00 mm | 93 % @Wavelength <=2500 nm, Thickness 0.0394 in | Very wavelength dependent - drop begins above 2500 nm and cutoff almost complete at 4200 nm; (includes surface reflection losses) |
| UV Transmittance | 0.00 % @Wavelength <=220 nm, Thickness 1.00 mm | 0.00 % @Wavelength <=220 nm, Thickness 0.0394 in | Highly wavelength dependent - cutoff below 220 nm; (includes surface reflection losses) |

| Electrical Properties | Metric | English | Comments |
|------------------------|--|--|----------|
| Electrical Resistivity | 2.50e+10 ohm-cm @Temperature 350 °C | 2.50e+10 ohm-cm @Temperature 662 °F | |
| Dielectric Constant | 5.8 @Frequency 1e+6 Hz | 5.8 @Frequency 1e+6 Hz | |

| Descriptive Properties | Value | Comments |
|------------------------|-------|----------|
| Color | Clear | |

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