

Additional specifications for HPLC low pressure PFA tubing - Tech Information

Tech Information

Additional Specifications for HPLC Low-Pressure PFA Tubing

When selecting **low-pressure PFA tubing** for HPLC systems, it's helpful to understand the material's full performance profile. Some manufacturers provide detailed specifications across physical, mechanical, electrical, and thermal categories. Below is a summary of commonly listed values:

Physical Properties

- **Density:** 2.12 – 2.17 g/cc
 - **Water Absorption:** < 0.03%
 - **Crystallinity:** 48 – 70%
 - **Refractive Index:** 1.350
 - **Radiation Resistance:** 1 – 10 MRad
 - **Oxygen Index:** > 95%
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Mechanical Properties

- **Hardness (Shore D):** 55 – 60
 - **Ultimate Tensile Strength:** 25 – 28 MPa
 - **Elongation at Break:** 250 – 420%
 - **Modulus of Elasticity:** 0.48 GPa
 - **Flexural Modulus:** 0.50 – 0.70 GPa
 - **Coefficient of Friction:** 0.04 – 0.20
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Electrical Properties

- **Volume Resistivity:** $1.0 \times 10^{18} \Omega \cdot \text{cm}$
 - **Dielectric Constant (1 MHz):** 1.9 – 2.1
 - **Dielectric Strength:** 2030 V/mil
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Thermal Properties

- **Thermal Conductivity:** 0.15 – 0.25 W/m·K
- **Maximum Service Temperature (Air):** 260 °C
- **Minimum Service Temperature (Air):** -200 °C
- **Melting Temperature:** 300 – 315 °C
- **Glass Transition Temperature:** 90 °C

- **Decomposition Temperature:** 475 °C
 - **Thermal Expansion Coefficient (20 °C):** 120 – 140 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$
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These specifications can help guide tubing selection for applications requiring chemical resistance, thermal stability, and mechanical durability in HPLC systems.

Click [HERE](#) for Low Pressure, HPLC Tubing Ordering Information

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