Platinum-Cured Silicone Tubing

• Specifications:
  • Biocompatible
  • Moderate lifetime
  • Moderate spallation
  • Moderate pressure
  • Moderate gas permeability
  • Translucent
  • Dynamic temperature range: -40 to 100°C (-40 to 212°F)
  • USP Class V Extractables, USP class VI, FDA 21 CFR 177.2600, FDA 21 CFR 221 and 211, REACH, RoHS, ADCF
  • Sterilization: autoclave, gamma, EtO
Platinum-Cured Silicone Tubing

- **Applications:**
  - Process transfer of pharmaceutical fluids and intermediates
  - High-purity fluid processing
  - General analytical applications
  - Bioreactor process lines
  - Buffer and media preparation
Puri-Flex™ Tubing

• Specifications:
  • Biocompatible
  • Heat sealable and weldable
  • Longer lifetime when compared to silicone
  • Lower spallation when compared to silicone
  • Higher pressure when compared to silicone
  • Lower gas permeability compared to silicone
  • Translucent
  • Dynamic temperature range: -30 to 100°C (-22 to 212°F)
  • USP Class VI, FDA 21 CFR 177.2600 and 177.1810, REACH, RoHS, ADCF
  • Sterilization: autoclave, gamma, EtO
Puri-Flex™ Tubing

- Applications:
  - Cell harvest and media process systems
  - Bioreactor process lines
  - Buffer and media preparation
  - Cell culture operations
  - Purification operations
  - Diagnostics products
  - Tubing and bag manifolds
C-Flex® Tubing

• **Specifications:**
  - Biocompatible
  - Heat sealable and weldable
  - Similar lifetime when compared to silicone
  - Similar spallation when compared to silicone
  - Similar pressure when compared to silicone
  - Similar gas permeability compared to silicone
  - Opaque
  - Dynamic temperature range: -40 to 40°C (-40 to 104°F)
  - USP Class VI, EP 3.2.9, FDA 21 CFR 177.2600, REACH, RoHS, ADCF
  - Sterilization: autoclave, gamma, EtO
C-Flex® Tubing

- Applications:
  - Aseptic sealing disconnections
  - Aseptic welding connections
  - Ideal for use in single-use assemblies
  - Buffer and media preparation
  - Cell culture operations
  - Purification operations
  - Diagnostics products
  - Tubing and bag manifolds
PharmaPure® Tubing

• **Specifications:**
  - Biocompatible, nontoxic, nonhemolytic
  - Heat weldable
  - Much longer lifetime when compared to silicone
  - Much lower spallation when compared to silicone
  - Higher pressure when compared to silicone
  - Lower gas permeability compared to silicone
  - Opaque
  - Dynamic temperature range: -20 to 100°C (-4 to 212°F)
  - USP Class VI, FDA 21 CFR 177.2600, EP 3.2.9, REACH, RoHS, ADCF
  - Sterilization: autoclave, gamma, EtO
PharmaPure® Tubing

• Applications:
  • Cell harvest and media process systems
  • Vaccine manufacturing
  • Bioreactor process lines
  • Aseptic filling
  • Diagnostic test products
  • Production filtration and fermentation
PharMed® BPT Tubing

• **Specifications:**
  • Biocompatible, nontoxic, nonhemolytic
  • Heat weldable
  • Much longer lifetime when compared to silicone
  • Lower spallation when compared to silicone
  • Higher pressure when compared to silicone
  • Lower gas permeability compared to silicone
  • Opaque
  • Dynamic temperature range: -50 to 40°C (-58 to 104°F)
  • USP Class VI, EP 3.2.9, REACH, RoHS, ADCF
  • Sterilization: autoclave, gamma, EtO
PharMed® BPT Tubing

• Applications:
  • Cell harvest and media process systems
  • Bioreactor process lines
  • Production filtration and fermentation
  • Aseptic filling
  • Shear-sensitive fluid transfer
  • Diagnostics and laboratory analysis
GORE® STA-PURE® Tubing, Series PCS

- Specifications:
  - Biocompatible
  - Stable, repeatable flow
  - Much longer lifetime when compared to silicone
  - Much lower spallation when compared to silicone
  - Much higher pressure when compared to silicone
  - Lower gas permeability compared to silicone
  - Opaque
  - Dynamic temperature range: -44 to 200°C (47 to 392°F)
  - USP Class VI, EP 3.2.9, FDA 21 CFR 177.2600, REACH, RoHS, ADCF
  - Sterilization: autoclave, EtO
GORE® STA-PURE® Tubing, Series PCS

- Applications:
  - Ultra-pure fluid transfer
  - Media processing
  - Cell harvesting and filtration
  - Purification
  - Final product fill
  - Sensitive and sanitary production environment

Formulation & Hydration | Cell Culture & Fermentation | Harvest & Collection | Separation | Purification | Finishing | Storage-Filling

Media Hydration → Filtration → Cell Culture Bioreactor → Harvest Collection → Centrifugation → Separation → Purification → Finishing → Bulk Storage → Filling
GORE® STA-PURE® Tubing, Series PFL

• Specifications:
  • Biocompatible
  • Stable, repeatable flow
  • Much longer lifetime when compared to silicone
  • Much lower spallation when compared to silicone
  • Much higher pressure when compared to silicone
  • Lower gas permeability compared to silicone
  • Opaque
  • Dynamic temperature range: -44 to 200°C (47 to 392°F)
  • USP Class VI, REACH, RoHS, ADCF
  • Sterilization: autoclave
GORE® STA-PURE® Tubing, Series PFL

• Applications:
  • Drug final fill
  • Pumping aggressive solvents in chromatography and combinatorial chemistries
  • Pumping solvent-based reactants during synthesis of active pharmaceutical ingredients
Chem-Durance® Bio Tubing

- **Specifications:**
  - Biocompatible
  - Heat weldable
  - Longer lifetime when compared to silicone
  - Lower spallation when compared to silicone
  - Higher pressure when compared to silicone
  - Lower gas permeability compared to silicone
  - Opaque
  - Dynamic temperature range: 0 to 40°C (32 to 104°F)
  - USP Class VI, FDA 21 CFR 177.2600, REACH, RoHS, ADCF
  - Sterilization: autoclave, EtO
Chem-Durance® Bio Tubing

• **Applications:**
  - Wide variety of pharmaceutical processing and biotech applications
  - General laboratory and analytical use
  - Specialty chemical production/processing
  - Diagnostic testing
  - Sensitive-fluid transfer
Tygon® E-LFL Tubing

- Specifications:
  - Biocompatible
  - Smooth bore
  - Longer lifetime when compared to silicone
  - Lower spallation when compared to silicone
  - Higher pressure when compared to silicone
  - Much lower gas permeability compared to silicone
  - Transparent
  - Dynamic temperature range: 0 to 40°C (32 to 104°F)
  - USP Class VI, EP 3.2.9, FDA 21 CFR 177.2600, EU Food, REACH, RoHS, ADCF
  - Sterilization: autoclave, gamma, EtO
Tygon® E-LFL Tubing

• Applications:
  • Wide range of liquid transfer in labs and bioprocess applications
  • Production filtration and fermentation
  • Food and cosmetic processing
  • Flavor and vitamin concentrate dispensing
  • Shear-sensitive fluid transfer
Peroxide-Cured Silicone Tubing

• **Specifications:**
  - Biocompatible
  - Moderate lifetime
  - Moderate spallation
  - Moderate pressure
  - Moderate gas permeability
  - Translucent
  - Dynamic temperature range: -40 to 100°C (-40 to 212°F)
  - USP Class VI, EP 3.2.9, FDA 21 CFR 177.2600, REACH, RoHS, ADCF
  - Sterilization: autoclave, gamma, EtO
Peroxide-Cured Silicone Tubing

• Applications:
  • Process transfer within food & beverage, and industrial markets
  • General analytical applications
Dow Corning® Pharma Tubing

• Specifications:
  • Biocompatible
  • Lower extractables when compared to silicone
  • Moderate to much high pressure when compared to silicone
  • Moderate to lower gas permeability when compared to silicone
  • Translucent
  • Dynamic temperature range: -51 to 232°C (-60 to 460°F)
  • USP Class V Extractables, USP class VI, FDA 21 CFR 177.2600, FDA 21 CFR 221 and 211, REACH, RoHS, ADCF
  • Sterilization: autoclave, gamma, EtO
  • Available as either Pharma-50, Pharma-65, or Pharma-80 formulations (durometer)
Dow Corning® Pharma Tubing

- **Applications:**
  - Pharmaceutical, biotech, and ultra-pure fluid processing
  - Fluid transfer applications
  - Higher durometer tubing capable of higher pressure transfer of fluids
Additional Tubing Data

- Tubing Life
- Pressure Guidelines
- Vacuum/Suction Lift
- Gas Permeability

Ensure top performance with your Masterflex® pump head by using precision-extruded Masterflex® tubing to deliver accurate flow rates. Twenty-one different material formulations are available.

To order the correct tubing:

1. Consider all the aspects of your application: flow rate, pressure, etc.

2. Review the Masterflex Tubing Compatibility Data (available online), as well as specific information about individual tubing materials.

3. Use the “Tubing Material Life Comparison” graph and table at right to select the tubing with the longest life.

If your application requires the generation of high pressure or a strong vacuum/suction lift, refer to the “Pressure Guidelines” and “Vacuum/Suction Lift” graphs at right. These graphs can assist you in determining which tubing will pressurize most rapidly or develop the strongest vacuum/suction lift in your application.

If your application requires pumping air-sensitive gases or liquids, refer to the “Gas Permeability” graph below right to choose the tubing with the lowest permeability.

To minimize permeation of gases through the tubing wall, use firm tubing. Masterflex® L/S® and I/P® High-Performance precision tubing (L/S® 15, L/S® 24, L/S® 35, L/S® 36, I/P® 70, I/P® 88, and I/P® 89) is less permeable than Precision tubing sizes.

Additional tubing data can be found in our Masterflex® Encyclopedia