

How to choose Peristaltic Pump Tubing

Chemical compatibility:

Chemical compatibilities of tubing are some good chemical properties the tubing appears when transferring fluid. The normal tubing only general touch with chemical material, but peristaltic pump's tubing touch with chemical material under working conditions, so the chemical compatibility level is different between peristaltic pump's tubing and general tubing. Peristaltic pump's tubing has the corresponding materials to meet demand, according to transmission various liquid. The user should check every kind of chemical material in the solution, to make sure it can handle with the chosen tubing compatible.

Compression:

The factors of affecting the tubing compression: material, diameter and the wall thickness of the scale. If the system pressure over the limit of the tubing, the tubing will be expended, result in the tubing excessive wear or tubing burst.

Temperature:

The working temperature range of tubing is the main factor of user considers. Different materials have different temperature performance. Some materials such as silicone rubber is wider temperature range, it is suitable for the high temperature and low temperature. But some tubing materials can work only for a small range. The user in the selection of tubing materials, should first make clear the maximum and minimum temperature, then ensure the selected tubing can work in the temperature range.

Size:

The size of the tubing direct influence on the flow, the inner diameter of the tubing decided the flow, is directly proportional to the flow. Wall thickness not only influences the resilience of tubing, but also influences the life of the tubing.

Transparency:

If the operator needs observe the status such as: the bubbles, particles, pollution case, should choose the Tygon® or silicone rubber tubing, and if the fluid is not easy to exposure, should choose not transparent tubing.

Gas permeability:

For some fluid is sensitive with the gas, some easy by oxidation, or anaerobic cell cultures. Users should consider the gas permeability factor of tubing. In general, the highest porosity is silicon tubing. So some fluid that unfavorable contact with the gas, should choose the low porosity of tubes.



The authentication:

Tubing is used for related purposes may be through the relevant authentication. Such as the United States pharmacopoeia USP, European pharmacopoeia EP, the United States food and drug administration standard FDA, the United States department of agriculture standard USDA and the national sanitation foundation standard NSF.

The service life of tubing:

Different tubes have different abilities of roller extruding, friction resistance. Different tubing type pipe, pump head, operation speed, the life are different. Choose the long life, thick wall tubing, big flow pump, run in lower speed can be obtained more long service life.

Flow range:

Each tubing is corresponding fixed flow range. We according to our customers needs of flow range choose corresponding tubing.

Routine disinfection and sterilization method of silicone tube :

1. **Boiling method:** boiling disinfection, using high temperature steam to kill viruses and bacteria.
2. **High pressure steam method :** Put the silicone tube in a closed high-pressure steam sterilization pot and keep it under a certain pressure for 15-30 minutes for sterilization. It can kill all microorganisms including spores. It is the most reliable and widely used physical sterilization law.
3. **Ethylene oxide fumigation :** Ethylene oxide is a kind of spectrum sterilizing agent, which can destroy and eliminate the activity of protein, and kill all kinds of microorganisms at room temperature, including spores, tubercle bacillus, bacteria, viruses, fungi, etc.
4. **Gamma-ray sterilization:** through gamma-ray irradiation, the DNA of microorganisms is destroyed and cell activity is lost, so as to achieve the purpose of sterilization.

Imported Pump Tube Specification

Specification ID×OD×wall thickness (mm)	Tubing	3350	E-3603	Pharmed BPT	Chemical	Viton	A-60-F	A-60-G	Tygon 2475	F-4040-A
0.19×1.99×0.9			√							
0.25×2.05×0.9			√	√						
0.38×2.18×0.9			√	√						
0.44×2.24×0.9			√							
0.5×2.1×0.8		√								
0.5×3.7×1.6				√						
0.51×2.31×0.9		√	√	√						
0.64×2.44×0.9		√	√							
0.76×2.46×0.85		√	√	√						
0.8×2.4×0.8		√	√							
0.8×4×1.6	13#	√	√	√	√	√	√	√		√
0.89×2.59×0.85		√	√	√		√				
1×2×0.5		√								
1×3×1				√			√	√		
1.02×2.72×0.85		√	√							
1.14×2.84×0.85		√	√	√		√				
1.3×3×0.85		√	√	√						
1.42×3.12×0.85		√	√	√		√				
1.5×3.5×1				√				√		
1.52×3.22×0.85		√	√	√						
1.6×3.2×0.8		√	√	√		√			√	
1.6×4.8×1.6	14#	√	√	√	√	√	√	√	√	√
1.6×6.4×2.4		√		√						
1.65×3.35×0.85		√	√			√				
1.85×3.55×0.85		√	√	√						
2×3.6×0.8										√
2×4×1		√	√	√			√	√		
2.06×3.76×0.85		√	√	√		√				
2.29×3.99×0.85		√	√	√						
2.4×4×0.8		√	√							
2.4×4.8×1.2										√
2.4×5.6×1.6	19#	√	√	√				√		
2.5×4.5×1				√			√	√		
2.4×7.2×2.4				√						
2.54×4.24×0.85		√	√			√				
2.64×4.88		√								
2.79×4.49×0.85		√	√	√		√				
3×5×1			√	√			√	√		
3.2×4.8×0.8		√	√	√		√				√
3.2×6.4×1.6	16#	√	√	√	√	√	√	√	√	√
3.2×8×2.4		√		√						
3.2×9.6×3.2		√						√		
3.5×5.44×0.97				√						
4×5.6×0.8		√	√							
4×6×1			√	√			√	√		
4×7.2×1.6			√							
4.8×6.4×0.8		√	√			√				
4.8×8×1.6	25#	√	√	√	√	√	√	√	√	√
4.8×9.6×2.4	15#	√	√	√	√	√	√	√		√