

Premium TL Series Light Blue Tubing

Additives	Blue Color
Best For Chunky Filaments	YES
Best For Flexible Filaments	NO
Can See Through	YES
Pulling Friction 1	0.8
Color	Blue, Translucent
Density (kg/m ³)	2100 +/- 100
Hardness	55
Inner Diameter (mm)	2.05 +/- 0.05
Linear Thermal Expansion at 250 °C	3.4–3.6%
Material	Highest Quality Pure Virgin PTFE
Melting point (°C) 4	around 300
Outer Diameter	3.95 +/- 0.05
Roundness (ε)	< 0.1
Stiffness 2	Medium
Thermal Conductivity (W/m-k)	0.25
Wear Rate (gm/s)	0.01
Young's Modulus (GPa)	0.5

1. **Pulling Friction:** This is calculated as the average force required to pull 1.2 m of 1.75 mm PLA filament through 1 m of tubing at a constant speed, relative 1 m of cheap white reference tubing. Note that although we observed the friction of the TL series to be about the same or even slightly lower than our XS series, it also has a larger internal diameter.
2. **Stiffness:** Other Bowden tubes may vary significantly in stiffness, depending on the material from which they're made. Our tubing generally tends to be more flexible than most, with the TL being more flexible than XS.
3. **Young's Modulus (YM)** is the measure of elasticity of the material. Our XS series additives give the PTFE a slightly greater YM than the TL Series.
4. **Melting point:** Temperatures were approximated by heating samples of all tubing simultaneously, observing how quickly each one began to deform. Printer failures may happen at significantly lower temperatures.

Printing high-temperature materials may create dangerous off-gassing.
Please refer to [the safety page](#).