

Premium XS Series Dark Blue Tubing

Additives	Blue Color and Secret High Lubricity Additive Mixture
Best For Chunky Filaments	YES
Best For Flexible Filaments	YES
Can See Through	NO
Pulling Friction 1	0.8
Color	Dark Blue
Density (kg/m ³)	2300 +/- 0.05
Hardness	60–65
Inner Diameter (mm)	1.90 +/- 0.05
Linear Thermal Expansion at 250 °C	2.2–3.3%
Material	Highest Quality Pure Virgin PTFE
Melting point (°C) 4	Up to 340
Outer Diameter	3.95 +/- 0.05
Roundness (€)	< 0.1
Stiffness 2	Medium-high
Thermal Conductivity (W/m-k)	0.25
Wear Rate (gm/s)	0.01
Young's Modulus (GPa)	0.53

1. **Pulling Friction:** This is calculated as the average force required to pill 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.