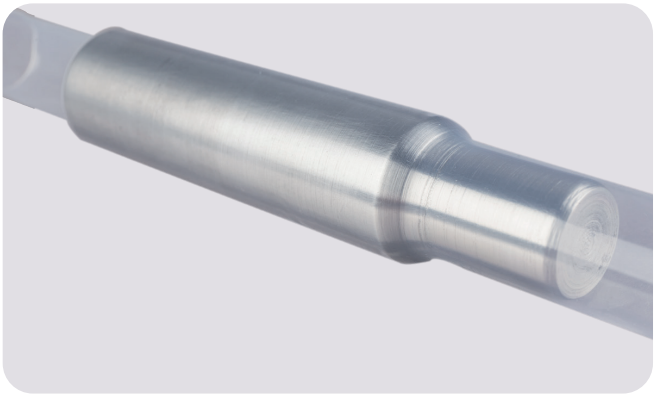
Fluoropolymer Heat Shrink Tubing

Guidelines



Product Range

Fluoroplastic heat shrink tubing must be produced from premium quality extrusions to ensure sufficient quality following the expansion process. Stringent quality checking prior to expansion ensures a quality finished Polyflon product. Expansion takes place close to the material's melt temperature with no negative effects on mechanical or electrical properties. When subjected to the original expansion temperature the tubing will shrink back to its original extruded size. PTFE has a shrink ratio of 4:1, FEP has a lower ratio of 1.3:1.

Choice of Material

Due to PTFE having a high shrink ratio the encapsulating of components with wide variations in diameter is possible. FEP has a smaller ratio and therefore, should be used on objects with more consistent dimensions. For applications where a very smooth surface is required FEP is an effective material.

Processing Information

The following table sets out the shrinking temperatures required for all three products. Care should be taken to ensure adequate ventilation as inhaled fumes may cause nausea, dizziness and possibly 'polymer fume fever', all of which subside with the passing of time. PTFE is ready to shrink once it starts to become transparent – the gel stage. FEP has a much lower shrink temperature – take care not to overheat, result: dripping.

+44 (0)1785 859 054 enquiries@polyflon.co.uk www.polyflon.co.uk

16 Raleigh Hall, Eccleshall, Stafford, ST21 6JL

Shrink Temperatures (°C)

	Material		
	PTFE	FEP	Dual Wall
Shrink Temperature	330	130-150	330
Melt Temperature	380	275	275
Working Temperature	265	205	205

To achieve a tight shrink fit with PTFE you may have to heat the object itself prior to shrinking. The object should be heated evenly on the periphery as irregular heating and cooling can cause wrinkles and cracks. Ovens, shrink tunnels, infrared radiators, fan heaters or even a clean gas flame can be used as the heat source.

Please note that the shrinking process can result in a longitudinal shrinkage or elongation and the change in length may be +/-10%.

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