


DUAL WALL HEAT SHRINK TUBING



Optinova's Dual Wall Heat Shrink tubing has a PTFE outer layer and an FEP inner layer that offers a maximum longitudinal variation of +0%/-15% after application.

When heated, the inner FEP layer melts and encapsulates the junction to eliminate voids and air channels to withstand extreme environmental conditions.

The high service temperature outer PTFE layer compresses the molten FEP, creating a liquid and vapor-tight seal.

Available in a variety of sizes, dimensions, and shrink ratios, our high-performance fluoropolymer heat shrinkable tubing can be customized to meet your unique needs to ensure maximum protection, reliability, and performance.

KEY ADVANTAGES

- Protection from environmental exposure
- Unaffected by most chemical solvents
- Strengthen junctions against vibration and stress
- Secure and consistent tolerances with reliable performance
- Conform and exceed standards required in aerospace, automotive, military, and commercial industries

APPLICATIONS

- Protection and isolation of cable junction and connector
- Encapsulation of DNOX sensors in SCR systems
- Electronic component and sensor encapsulation
- Other air and liquid tight encapsulations

Contact our sales offices or visit our website for more information about samples and specifications!

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STANDARD DIMENSIONS

Optinova's Dual Wall Heat Shrink Tubing has a standard wall configuration that fits most industrial applications. However, we can also make custom sizes and smaller wall thickness to meet specific design requirements. Contact our global sales offices for consultation on the best solution for your tubing need.

Although we offer standard packing of 1220 mm cut-to-length pieces, we can also accommodate to your requested sizes. If your application or process requires smaller sizes, we can provide cut-to-length pieces as small as 20 mm without compromising the overall performance of the tubing

Type	Minimum ID as supplied		Maximum ID as supplied		Full Shrunk Wall	
	in	mm	in	mm	in	mm
036 S	0.036	0.914	0	0	0	0
060 S	0.060	1.524	0	0	0	0
130 S	0.130	3.302	0	0	0	0.800
160 S	0.160	4.064	0	0	0	0.800
190 S	0.190	4.826	0.062	1.575	0.035	0.889
250 S	0.250	6.350	0.125	3.175	0.035	0.889
350 S	0.350	8.890	0.190	4.826	0.035	0.889
450 S	0.450	11.430	0.312	7.925	0.055	1.397
700 S	0.700	17.780	0.440	11.176	0.055	1.397
900 S	0.900	24.130	0.630	16.002	0.065	1.651

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FEP MATERIAL PROPERTIES

	Property	Specification	Unit	
General	Continuous service temperature	Maximum	°C	200
		Maximum	°F	392
	Chemical resistance			Excellent
	Specific gravity	D 792		2.15
Electrical	Dielectric constant	D 150 at 10 ³ Hz		2.1
		D 150 at 10 ⁶ Hz		2.1
	Dielectric dissipation factor	D 150 at 10 ³ Hz		0.0001
		D 150 at 10 ⁶ Hz		0.0008
	Dielectric strength	D 149	Volt/mil	2 000
	Volume resistivity	D 257	Ohm • cm	> 10 ¹⁸
Environmental	Water absorption	D 570	%	< 0.01
	Weather resistance			Excellent
	Oxygen index	D 2863	%	> 95
	Flammability	UL 94		V-0
Mechanical	Tensile strength	D 1708, D 638	MPa	24.1
	Elongation	D 1708, D 638	%	300
	Compressive strength	D 695	MPa	15.2
	Impact strength	D 256 at 23°C	Ft-Lb/in	No Break
	Flexural modulus	D 790 at 23°C	MPa	654.6
	Tensile modulus	D 638	MPa	344.5
	Hardness	D 2240		D-55
Thermal	Melting point		°C	270
			°F	518
	Thermal conductivity	C-177	BTU/hr/ft ² /°F.in	1.4
	Deflection temperature			
	66 psi	D 648	°C	59
	264 psi	D 648	°C	57
	Deflection temperature			
	66 psi	D 648	°F	138
	264 psi	D 648	°F	134

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PTFE MATERIAL PROPERTIES

	Property	Specification	Unit	
General	Continuous service temperature	Maximum	°C	260
		Maximum	°F	500
	Chemical resistance			Excellent
	Specific gravity	D 792		2.15
Electrical	Dielectric constant	D 150 at 10 ³ Hz		2.1
		D 150 at 10 ⁶ Hz		2.1
	Dielectric dissipation factor	D 150 at 10 ³ Hz		0.0002
		D 150 at 10 ⁶ Hz		0.0002
	Dielectric strength	D 149	Volt/mil	> 1 400
	Volume resistivity	D 257	Ohm • cm	> 10 ¹⁸
Environmental	Water absorption	D 570	%	< 0.01
	Weather resistance			Excellent
	Oxygen index	D 2863	%	> 95
	Flammability	UL 94		V-0
Mechanical	Tensile strength	D 1708, D 638	psi	3 500
	Elongation	D 1708, D 638	%	300
	Compressive strength	D 695	psi	3 500
	Impact strength	D 256 at 23°C	Ft-Lb/in	3.5
	Flexural modulus	D 790 at 23°C	psi	90 000
	Tensile modulus	D 638	psi	80 000
	Hardness	D 2240		D-60
Thermal	Melting point		°C	327
			°F	620
	Thermal conductivity	C-177	BTU/hr/ft ² /°F.in	1.7
	Deflection temperature 66 psi	D 648	°C	122
		D 648	°C	55
	Deflection temperature 66 psi	D 648	°F	252
		D 648	°F	131
	264 psi	D 648		

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