



HSDW

Dual Wall Tubing

Adhesive lined flexible flame retardant tubing

■ **Shelf life & storage:**

Heat Shrink Products have a over 5 year's shelf life from date of manufacture when stored in a humidity controlled storage(-10°C to 40°C and <75% relative humidity).

■ **Ordering information:**

Standard colors:
Black.

■ **Applications:**

Designed to provide both insulation and sealing for protected articles. Typical application are environment sealing of electrical components such as wire splices and harness in automobile and communication industry.

■ **Features:**

Operating temp.: -55°C to 125°C	Voltage rating: 600V
UV resistant(black)	Flame retardant VW-1(except clear)
Flexible	Shrink ratio 3:1; 4:1
Min. full recovery temp.: 110°C	Approvals: UL 224 E204071
SAE-AMS-DTL 23053/4 compliant	RoHS compliant

■ **Typical technical performances(for jacket layer):**

Test Items	Test Method	Test Requirements
Tensile strength	ASTM D 2671	10.4MPa minimum
Ultimate elongation	ASTM D 2671	200% minimum
Tensile strength Aging at 158°C for 168hrs	UL 224	70% retention minimum
Ultimate elongation after Aging at 158°C for 168hrs	UL 224	100% minimum
Heat shock at 250°C for 4hrs	UL 224	No dropping & cracking of out jacket
Flammability	UL 224	VW-1(except for clear)
Volume resistance	UL 224	10 ¹⁴ Ω.cm minimum
Cold bend at -30°C for 1hr	ASTM D 2671	No cracking

■ **Dimensions:**



Adhesive-lined tubing, shrink ratio 3:1				
Size (Inch)	As supplied (mm)	After recovered (mm)		
	D*(Min.)	d*(Max.)	w*(Min.)	A*(nom.)
1/8	3.0	1.0	1.00	0.40
3/16	4.8	1.6	1.00	0.40
1/4	6.0	2.0	1.00	0.40
3/8	9.0	3.0	1.35	0.55
1/2	12.0	4.0	1.65	0.70
3/4	19.0	6.4	2.10	0.70
1	24.0	8.0	2.35	0.95
1 1/2	40.0	13.0	2.40	0.95

Adhesive-lined tubing, shrink ratio 4:1				
Size (Inch)	As supplied (mm)	After recovered (mm)		
	D*(Min.)	d*(Max.)	w*(Min.)	A*(nom.)
3/16	4.0	1.0	1.00	0.45
1/4	6.0	1.5	1.00	0.45
5/16	8.0	2.0	1.00	0.45
1/2	12.0	3.0	1.35	0.55
5/8	16.0	4.0	1.65	0.70
1	24.0	6.0	2.10	0.70
1 1/4	32.0	8.0	2.35	0.95
1 1/2	38.1	9.5	2.35	0.95
2	52.0	13.0	2.40	0.95

D* = Inner diameter as supplied
A* = Adhesive thickness after fully recovered

d* = Inner diameter after fully recovered
w* = Total wall thickness after fully recovered