

M23053/5 C1

2:1 SHRINK RATIO, FLEXIBLE, FLAME RETARDANT, POLYOLEFIN TUBING


Applications

MIL-DTL-23053/5 C1 is a flexible, flame retardant heat shrinkable polyolefin tube. It is designed for a wide range of applications requiring high heat-resistance, including insulation for electric & electronic devices, wire strain relief and protective covering for parts such as resistors and capacitors.

Features

- ★ Low Temperature Printable – Thermal Transfer or Hot Stamp
- ★ In stock for immediate shipments – All Colors and Yellow/Green stripe.
- ★ Shrink ratio: 50% or more in the radial direction, 7% or less in the axial direction
- ★ Continuous operating temperature: - 55°C to 135°C
- ★ Flammability: UL VW-1, CSA OFT, -F-MARK (except clear)
- ★ Highly heat-resistance
- ★ High resistance to chemicals and oils

Standard

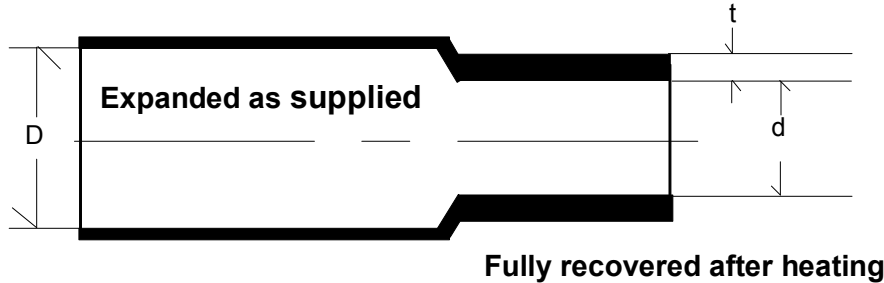
- ★ UL 224 (File Number: E319303) 
- ★ MIL-DTL-23053/5 Class 1 & Class 3 (Clear is Class 2)
- ★ RoHS Compliant

Specification Values

Property		Test Method	Value	
Physical	Unaged	Tensile strength	ASTM D 2671	Min. 1.06 kgf/mm ² (1,500 psi)
		Elongation		Min. 200%
	Aged	Tensile strength	175°C/168 hrs	Min. 0.8 kgf/ mm ² (1,000 psi)
		Elongation		Min. 100%
	Deformation		158°C/1 hr	Max. 50%
	Heat shock		250°C/4 hrs	No crack
	Cold bend		- 55°C/4 hrs	No crack
	Flexibility		158°C/168 hrs	No crack
	Secant modulus		-	Max. 17.59 kgf/mm ² (25,000 psi)
Specific gravity		ASTM D 2671	1.5 max.	
Electrical	Dielectric strength		ASTM D 149	Min. 20kV/1 minute
	Volume resistivity		-	Min. 10 ¹⁴ Ω - cm
Chemical	Copper corrosion		175°C/16 hrs	No corrosion
	Copper stability		158°C/168 hrs	No sign of degradation
	Fungus resistance		ASTM G 21	No growth
	Flammability		UL VW-1 ASTM D 2671	Pass – self extinguishing

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Product Dimensions

Minimum Shrink Temperature: 90°C

Size	Expanded		Recovered				Standard Spool Length
	Internal Diameter (min.) (D)		Internal Diameter (max.) (d)		Minimum Total Wall Thickness (t)		
	In.	mm	In.	mm	In.	mm	
Inch Size							Ft.
3/64"	0.051	1.3	0.022	0.58	0.013	0.330	500
1/16"	0.070	1.8	0.031	0.79	0.014	0.356	500
3/32"	0.106	2.7	0.046	1.17	0.017	0.432	500
1/8"	0.133	3.4	0.062	1.57	0.017	0.432	500
3/16"	0.192	4.9	0.093	2.36	0.017	0.432	250
1/4"	0.251	6.4	0.125	3.18	0.022	0.559	250
5/16"	0.314	8.0	0.157	4.0	0.022	0.559	250
3/8"	0.374	9.5	0.187	4.75	0.022	0.559	200
1/2"	0.500	12.7	0.250	6.35	0.022	0.559	200
5/8"	0.657	16.7	0.314	8.0	0.027	0.686	200
3/4"	0.751	19.1	0.370	9.35	0.027	0.686	100
1"	1.02	25.7	0.500	12.7	0.030	0.762	100
1-1/4"	1.26	32.2	0.630	15.9	0.034	0.864	100
1-1/2"	1.5	38.1	0.750	19.10	0.034	0.864	100
2"	2.0	51.0	1.0	25.4	0.038	0.965	100
3"	3.0	76.2	1.5	38.1	0.042	1.07	100
4"	4.0	101.6	2.0	50.8	0.046	1.17	100
5"	5.0	127.0	2.5	63.5	0.046	1.17	100
Metric Size							
1.5	0.067	1.7	0.030	0.75	0.014	0.356	Cut to meet your special orders
2.0	0.083	2.1	0.039	1.00	0.017	0.432	
2.5	0.102	2.6	0.050	1.25	0.017	0.432	
3.0	0.122	3.1	0.060	1.50	0.017	0.432	
3.5	0.142	3.6	0.069	1.75	0.017	0.432	
4.0	0.161	4.1	0.079	2.00	0.017	0.432	
5.0	0.201	5.1	0.098	2.50	0.022	0.559	
6.0	0.240	6.1	0.118	3.00	0.022	0.559	
7.0	0.280	7.1	0.138	3.50	0.022	0.559	
8.0	0.319	8.1	0.158	4.00	0.022	0.559	
9.0	0.358	9.1	0.177	4.50	0.022	0.559	
10.0	0.398	10.1	0.197	5.00	0.022	0.559	
11.0	0.437	11.1	0.217	5.50	0.022	0.559	
12.0	0.476	12.1	0.236	6.00	0.022	0.559	
13.0	0.516	13.1	0.256	6.50	0.027	0.686	
14.0	0.555	14.1	0.276	7.00	0.027	0.686	
15.0	0.595	15.1	0.295	7.50	0.027	0.686	
16.0	0.634	16.1	0.315	8.00	0.027	0.686	
18.0	0.713	18.1	0.354	9.00	0.030	0.762	
20.0	0.791	20.1	0.394	10.00	0.030	0.762	
22.0	0.870	22.1	0.433	11.00	0.030	0.762	
24.0	0.949	24.1	0.472	12.00	0.030	0.762	
25.0	0.992	25.2	0.492	12.50	0.034	0.864	
26.0	1.032	26.2	0.512	13.00	0.034	0.864	
28.0	1.110	28.2	0.551	14.00	0.034	0.864	
30.0	1.190	30.2	0.591	15.00	0.034	0.864	
32.0	1.268	32.2	0.630	16.00	0.034	0.864	