2:1 TEFLON SHRINKflex® SHRINKTUBING · FLAME RETARDANT

SHRINKFLEX® 2:1 PTFE

SHRINKS TO 1/2 ITS ORIGINAL DIAMETER · MEETS SPECIFICATION MIL-I-DTL-23053/12
EXCELLENT DIELECTRIC STRENGTH · FLAME RESISTANT

2:1 Polytetrafluoroethylene heatshrink tubing has the lowest coefficient of friction of any polymer and possesses a broad temperature range, allowing it to excel equally in extreme cold and hot environments. PTFE's excellent dielectric strength makes it highly suited for the encapsulation of wires and electrical components. Also it has has excellent lubricity and chemical resistance.

SIZING CHART

Nominal Size	Part #	Unshrunk Diameter /mm	Shrunk Diameter /mm	Wall Thickness /mm	4 Feet *Put-Ups M	Available Colors	Lbs/ 1Pc.
24 AWG	M23053-12-201-C	1.27	0.69	0.30	1	Clear CL	
22 AWG	M23053-12-202-C	1.40	0.81	0.30	1	Clear CL	
20 AWG	M23053-12-203-C	1.52	0.99	0.41	1	Clear CL	
19 AWG	M23053-12-204-C	1.65	1.09	0.41	1	Clear CL	
18 AWG	M23053-12-205-C	1.93	1.24	0.41	1	Clear CL	
17 AWG	M23053-12-206-C	2.16	1.37	0.41	1	Clear CL	
15 AWG	M23053-12-207-C	2.79	1.70	0.41	1	Clear CL	
14 AWG	M23053-12-208-C	3.05	1.83	0.41	1	Clear CL	
13 AWG	M23053-12-210-C	3.56	2.03	0.41	1	Clear CL	
12 AWG	M23053-12-211-C	3.81	2.26	0.41	1	Clear CL	
11 AWG	M23053-12-212-C	4.32	2.57	0.41	1	Clear CL	
10 AWG	M23053-12-213-C	4.85	2.84	0.41	1	Clear CL	
9 AWG	M23053-12-214-C	5.21	3.15	0.51	1	Clear CL	
1/8"	M23053-12-215-C	5.46	3.30	0.51	1	Clear CL	
8 AWG	M23053-12-216-C	6.10	3.58	0.51	1	Clear CL	
7 AWG	M23053-12-217-C	6.86	4.01	0.51	1	Clear CL	
6 AWG	M23053-12-218-C	7.67	4.52	0.51	1	Clear CL	
5 AWG	M23053-12-219-C	8.13	5.03	0.51	1	Clear CL	
4 AWG	M23053-12-220-C	9.40	5.69	0.51	1	Clear CL	
3 AWG	M23053-12-221-C	9.91	6.32	0.51	1	Clear CL	
1/4"	M23053-12-222-C	10.41	6.60	0.51	1	Clear CL	
2 AWG	M23053-12-223-C	10.92	7.06	0.51	1	Clear CL	
1 AWG	M23053-12-224-C	11.43	7.90	0.51	1	Clear CL	
5/16"	M23053-12-225-C	11.94	8.36	0.51	1	Clear CL	
0 AWG	M23053-12-226-C	11.94	8.81	0.51	1	Clear CL	
3/8"	M23053-12-228-C	14.22	10.13	0.64	1	Clear CL	
7/16"	M23053-12-229-C	16.64	11.73	0.64	1	Clear CL	
1/2"	M23053-12-230-C	19.05	13.31	0.64	1	Clear CL	
5/8"	M23053-12-231-C	23.62	16.64	0.76	1	Clear CL	
3/4"	M23053-12-232-C	28.58	19.96	0.89	1	Clear CL	
7/8"	M23053-12-233-C	33.27	23.14	0.89	1	Clear CL	
1"	M23053-12-234-C	38.10	26.31	0.89	1	Clear CL	

TECHFLEX® Braided Sleeving Products

HEATSHRINK TUBING
Technical Data Sheet

CHEMICAL RESISTANCE

Common Solvents	High
Acids	High
Bases	High

PHYSICAL PROPERTIES

Wall Thickness	.30mm-.89mm
Flammability Rating	Flame Resistant
Recommended Cutting	Scissors
Colors	1

FLAMMABILITY

Rating	Flame Resistant

FEATURES

Material	**Polytetrafluroethylene**
Drawing Number	**TF001PTFE2-WD**

OPERATING TEMPERATURES

Shrinks	650°F / 343°C
Maximum Continuous *(Mil-I-23053)*	500°F / 260°C
Minimum Continuous *(Mil-I-23053)*	-328°F / -200°C

HEAT SHRINKING GUIDELINES

1. Always assure good ventilation in the immediate work area before beginning the heat shrink process. *(Caution: Fumes can cause nausea and dizziness).*

2. PTFE heat shrink tubing requires approximately 650°F ± 25°F (340°C ± 5°C) to initiate shrinkage. While this is a liberally safe range, these temperatures are approximate. Actual shrink temperatures may vary based on dimensions and wall thickness of the tubing, methods heat of application, and other factors. Techflex® is happy to provide samples to test in your application and help you determine the best material to use.

3. The part to be covered by the heat shrink must be able to tolerate the range of the heat shrink temperature.

4. Parts or mandrels may act as a heat sink which may cool the heat shrink prematurely or require more time to reach the necessary temperature. Therefore, Techflex® recommends preheating larger diameter mandrels and other parts.

5. Generally, heat shrink should be allowed to recover a minimum of 20%. You may experience some slight longitudinal change depending on the amount of recovery. Contact Techflex® if longitudinal change is a concern.

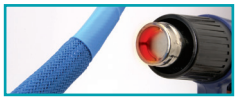
6. Heating and cooling should be even on all sides for best results. Uneven heating or cooling tends to split the side of the heat shrink that is still in the "gel" state while the other side may be in the hard or crystalline state, particularly upon recovery.

7. Ovens are the most reliable way to recover heat shrink products: Their generally more even heating reduces the risk of overheating the material (which can lead to brittleness and cracking). If a heat gun is to be used, please contact Techflex® for tips on proper heat application to achieve the most uniform recovery.

HOW-TO

Measure the Shrinkflex® tubing to length and cut with a scissor. The thickness of your bundle, as well as the desired final appearance, will determine the length of the tubing you cut. Generally, a piece 1½" - 2" long will accommodate almost any need. Single wires, or smaller bundles, require shorter pieces.

Slip the Shrinkflex® tubing over the bundle and position it so that both the sleeved and unsleeved portions are sufficiently covered. Notice the small pieces of tubing installed on single wires as part of a color coding system. If your project requires multiple operations, always work up from the smallest to the largest bundle.



Gently apply heat to Shrinkflex® tubing from a heat gun, hair dryer or torch with an appropriate attachment. Keep the heat source far enough away so that hot metal or direct flame does not come in contact with the tubing, wires or sleeving. Move the heat around the bundle to prevent damaging the sleeving and to ensure that all areas of the tubing have been shrunk. Once cooled, your installation is complete.

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