

Flexible, adhesive-lined, polyolefin heat-shrinkable tubing

TAT-125 is an adhesive-lined, flexible, thin-wall, heat-shrinkable tubing. It provides one-step electrical insulation and moisture sealing for a wide variety of applications.

TAT-125 is especially suitable for applications where the moisture seal

must withstand flexing or other physical abuse. Because both tubing and adhesive are flexible, the moisture seal is resistant to bending of the substrate.

The thin adhesive lining of TAT-125 melts and flows with the heat of

application to form a positive environmental seal. The adhesive will adhere to a wide variety of plastics, rubbers, and metals, including PVC, polyethylene, neoprene, lead, and steel.

**Temperature rating**

Full recovery temperature:	121°C
Continuous operating temperature:	-55°C to 110°C

**Specifications\***

Type	Raychem	Military	UL
TAT-125 Type 1 (colors)	RW-3032	AMS-DTL-23053/4, Cl. 2	E85381
TAT-125 Type 2 (clear)	RW-3032		

\*When ordering, always specify latest issue.

**Dimensions (millimeters/inches)**



Size	Inside diameter		Recovered wall thickness**			
	D (min.) Expanded as supplied	d (max.) Recovered after heating	W Nominal total wall	W1 Nominal adhesive wall		
1/8	3.2 0.125	1.6 0.062	0.68 0.027	0.23 0.009		
3/16	4.7 0.187	2.4 0.093	0.71 0.028	0.25 0.010		
1/4	6.4 0.250	3.2 0.125	0.74 0.029	0.13 0.005		
3/8	9.5 0.375	4.7 0.187	0.74 0.029	0.13 0.005		
1/2	12.7 0.500	6.4 0.250	0.76 0.030	0.15 0.006		
3/4	19.1 0.750	9.5 0.375	0.89 0.035	0.15 0.006		
1	25.4 1.000	12.7 0.500	1.07 0.042	0.20 0.008		
1 1/2	38.1 1.500	19.1 0.750	1.19 0.047	0.28 0.012		
2	50.8 2.000	25.4 1.000	1.65 0.065	0.56 0.022		
3	76.2 3.000	38.1 1.500	1.65 0.065	0.56 0.022		
4	101.6 4.000	50.8 2.000	1.78 0.070	0.56 0.022		

\*\*Wall thickness will be less if tubing recovery is restricted during shrinkage.

**Ordering information**

Colors	Standard Black Nonstandard White, red, blue, yellow, green, orange, brown, violet, clear (non-flame-retardant jacket)
Size selection	Always order the largest size that will shrink snugly over the component being covered.
Standard packaging	4-foot lengths
Nonstandard sizes	Sizes of 2 inches and larger are by special order only. Other nonstandard sizes are available upon special request.
Ordering description	Specify product name, size, and color; for example, TAT-125 1/4-0 (0=Black).

## Specification values

	Property	Unit	Requirement	Method of test
<b>Physical</b>	Dimensions	mm ( <i>inches</i> )	See reverse	ASTM D 2671
	Longitudinal change*	percent	+0, -5 maximum	ASTM D 2671
	Tensile strength	psi	1500 minimum	ASTM D 2671
	Ultimate elongation	percent	200 minimum	ASTM D 2671
	Secant modulus (as supplied)	psi	2.5 x 10 <sup>4</sup> maximum	ASTM D 2671
	Cold impact (at -55°C/-67°F)		No cracking	AMS-DTL-23053
	Heat shock (4 hours at 250°C/482°F)		No dripping, flowing, or cracking of outer wall	AMS-DTL-23053
	Heat resistance (168 hours at 175°C/347°F)		No dripping, flowing, or cracking of outer wall	AMS-DTL-23053
	Color		Pass	MIL-STD 104
Color stability (24 hours at 175°C/347°F)		Pass	MIL-STD 104	
<b>Electrical</b>	Dielectric strength	volts/mil		ASTM D 2671
	Sizes 1/8" through 1" Sizes 1 1/2" and larger		500 minimum 400 minimum	
	Volume resistivity	ohm-cm	1 X 10 <sup>12</sup> minimum	ASTM D 2671
<b>Chemical</b>	Copper corrosion (16 hours at 121°C/250°F)		No corrosion	ASTM D 2671 Procedures A & B
	Flame retardancy**		Self-extinguishing within 1 minute, 25% maximum flag burn	AMS-DTL-23053 Test A
	Fungus resistance		Rating of 1 or less	ASTM G21
	Water absorption (24 hours at 23°C/73°F)	percent	0.5 maximum	ASTM D 2671
	Fluid resistance (24 hours at 24°C/75°F) in: Hydraulic fluid (MIL-H-5606) JP-8 fuel (MIL-T-5624) Lubricating oil (MIL-L-7808 and MIL-I-23699)		AMS-DTL-23053	
	Salt water, 5% (O-S-1926) De-icing fluid (MIL-A-8243) Followed by tests for:			
	Tensile strength	psi	1000 minimum	ASTM D 2671
	Dielectric strength	volts/mil		ASTM D 2671
	Sizes 1/8" through 1"		400 minimum	
	Sizes 1 1/2" and larger		300 minimum	

Note: Except for dimensions and longitudinal change, specification values apply to outer jacket only. \*Sizes and colors not included in AMS-DTL-23053/4, Class 2 have a longitudinal change requirement of +0, -10 maximum. \*\*Only the outer jacket of TAT-125 is flame-retardant; the outer jacket of clear TAT-125, however, is not flame-retardant.

Typical properties	Adhesive		
	Peel strength		T-PEEL, 2"/minute
Polyethylene	15 lb./in. width		
Neoprene	10 lb./in. width		
PVC	10 lb./in. width		
Lead	5 lb./in. width		
Steel	15 lb./in. width		

Raychem is a trademark of Tyco Electronics Corporation.

**Users should independently evaluate the suitability of the product for their application.**

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