

Specialty – Static Dissipative Polyurethane

Static electricity is a stationary charge of electricity resting on an object's surface. With plastic tubing, the charge is generated usually by friction on the exterior or interior of the tubing. The charge is typically localized. This means that a charge may exist on one part of the tube but not the entire tube. The spotty nature of the charge makes it much harder to detect. Furthermore, humans can only sense electrostatic discharge (ESD) greater than 3,500 electrostatic volts. A charge as low as 100 ESD volts can damage certain circuits meaning that electronics can be destroyed by ESD without the person even knowing it. For more information about ESD, contact Freelin-Wade.

Specifications - 90A

Temperature Range:	-40°F to +165°F
Vacuum Rating:	To 28" Hg.
Diameter Tolerances:	±.005"
Tube Markings:	None
Dissipative Values:	(per EIA Std 541)
Volume Resistivity:	5 x 10 ⁹ ohms-cm
Surface Resistivity:	5 x 10 ⁹ ohms/sq.
Working Pressure:	3:1 Safety Factor
Recommended Fitting:	Barb

Freelin-Wade's Static Dissipative Polyurethane tubing is available in both a 90A durometer and an 85A durometer tube. It's made from an ether-based polyurethane that is specially formulated to help control ESD. It should always be used in low humidity environments or when tubing is going to be near circuit boards.

90A Static Dissipative Polyurethane

Part Number & Color Code	Packaging Unit Size	O.D.	I.D.	Wall	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						@75°F/25°C	@150°F/65°C			
1J-457-90-___	100' Bag	1/8"	.066"	.030"	01	135 PSI	70 PSI	.44	1/4"	B
1C-457-90-___	500' Reel									
1B-457-90-___	1000' Reel									
1A-457-90-___	2500' Reel									
1J-486-90-___	100' Bag	5/32"	3/32"	.031"	01 02 05 07 09 81	105 PSI	50 PSI	.61	3/8"	B
1C-486-90-___	500' Reel									
1B-486-90-___	1000' Reel									
1A-486-90-___	2500' Reel									
1J-451-90-___	100' Bag	1/4"	.160"	.045"	01 05 07	115 PSI	60 PSI	1.46	3/4"	B
1B-451-90-___	500' Reel									
1A-451-90-___	1000' Reel									
1J-452-90-___	100' Bag	3/8"	.245"	.065"	01 05	100 PSI	50 PSI	3.18	1"	B
1A-452-90-___	500' Reel									

Metric Sized

Part Number & Color Code	Packaging Unit Size	O.D. mm	I.D. mm	Wall mm	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						@75°F/25°C	@150°F/65°C			
1J-486-90-___	100' Bag	4	2.4	.8	01 02 05 07 09 81	105 PSI	50 PSI	.8	9.5 mm	B
1A-486-90-___	2500' Reel									
1J-488-90-___	100' Bag	6	4	1	01 07 09 81	90 PSI	45 PSI	1.3	12.7 mm	B
1A-488-90-___	1000' Reel									
1J-489-90-___	100' Bag	8	5	1.5	01 07	100 PSI	50 PSI	2.6	19 mm	B
1A-489-90-___	500' Reel									
1J-490-90-___	50' Bag	10	6.5	1.75	01 05 07	100 PSI	50 PSI	3.9	22.3 mm	B
1A-490-90-___	500' Reel									
1J-491-90-___	50' Bag	12	8	2	01	90 PSI	45 PSI	5.3	28.6 mm	B
1A-491-90-___	250' Reel									

Variations Available:

Coiling • Cutting • Bonding • Packaging • Sizes

Also known as Fre-Stat®

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Features

- Dissipates electrostatic charges with no chemical additives.
- Contains no conductive fillers and no particle emission.
- Dissipative values are permanent and cannot be washed away.
- Non-contaminating and non-outgassing.
- Ideal for low humidity environments.
- Non-corrosive to electronic leads and components.

Specifications - 85A

Temperature Range:	-40°F to +165°F
Vacuum Rating:	To 28" Hg.
Diameter Tolerances:	±.005"
Tube Markings:	None
Dissipative Values:	(per EIA Std 541)
Volume Resistivity:	4 x 10 ¹⁰ ohms-cm
Surface Resistivity:	1 x 10 ¹¹ ohms/sq.
Working Pressure:	3:1 Safety Factor
Base Resin Compliance:	FDA for Food Contact
Recommended Fitting:	Barb

85A Static Dissipative Polyurethane

Part Number & Color Code	Packaging Unit Size	O.D.	I.D.	Wall	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						@75°F/25°C	@150°F/65°C			
1J-413- ___	100' Bag	1/8"	1/16"	.031"	01 81	115 PSI	55 PSI	48	3/16"	B
1C-413- ___	500' Reel									
1B-413- ___	1000' Reel									
1A-413- ___	2500' Reel	5/32"	5/64"	.039"	01 04 07 09 25 27 28 45 46 81	125 PSI	60 PSI	.74	3/8"	B
1J-430- ___	100' Bag									
1C-430- ___	500' Reel									
1B-430- ___	1000' Reel									
1A-430- ___	2500' Reel									
1J-425- ___	100' Bag	1/4"	1/8"	.062"	01 81	120 PSI	60 PSI	1.91	1/2"	B
1B-425- ___	500' Reel									
1A-425- ___	1000' Reel									
1J-405- ___	100' Bag	3/8"	.245"	.065"	01 81	90 PSI	45 PSI	3.29	3/4"	B
1A-405- ___	500' Reel									

Metric Sized

Part Number & Color Code	Packaging Unit Size	O.D. mm	I.D. mm	Wall mm	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						@75°F/25°C	@150°F/65°C			
1J-458- ___	100' Bag	6	4	1	81	70 PSI	35 PSI	1.27	9.5 mm	B
1A-458- ___	1000' Reel									
1J-472- ___	100' Bag	9	6	1.5	01 81	80 PSI	40 PSI	2.84	19 mm	B
1A-472- ___	500' Reel									

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