

# Fre-Thane® Polyurethane

## Specifications

**Temperature Range**  
-40° F to +165° F

**Vacuum Rating**  
85A-95A: To 28" Hg.  
70: To 20" Hg.

**Diameter Tolerances**  
1/8" - 9/16": ±.005"  
3/4": ±.007"  
Metric: ±.127 mm

**Tube Markings**  
None

**Working Pressure**  
3:1 Safety Factor

**UV Stabilized**  
95A & 85A

**Resin Compliance**  
95A: NSF61  
Meets UL94HB  
90A: NSF61, FDA  
85A: NSF61  
Meets UL94HB  
USPVI  
70A: Meets UL94HB

**Suggested Fittings**  
95A: Barb, Push-In, FX  
90A: Barb  
85A: Barb  
70A: Barb



**P**olyurethane was invented in 1937 by German chemist Friedrich Bayer. His first fibers, named Perlon U, gained popularity during World War II as a replacement for rubber. Its first commercial application was as a thread to make lightweight, stretchable fabric, spandex.\* Polyurethane is comprised of two basic materials, isocyanate and polyol.

There are two general classes of polyurethane and both are commonly found in the market: Ether-base and Ester-base. Chemically, these are made from two different polyol alcohols that cause similar, but different reactions in the isocyanate. From the user's standpoint, the Ester-based polymer is less expensive. However, it degrades when exposed to moisture. Because of this, Fre-Thane® polyurethane tubing is manufactured using the Ether-based material.

Fre-Thane® has a high resistance to abrasion while being highly flexible and kink resistant. Its most notable quality though is its "memory." Fre-Thane® will stretch and flex but always return to its original shape.

It is available in 23 standard colors and a virtually infinite number of color variations.



\* Source: www.madehow.com

## Fre-Thane Polyurethane Colors

**A**ny of our polyurethane tubing products listed on pages 9 and 10 are available in the colors shown below. If not shown as a standard item, please allow seven business days to fulfill your order.



## Fre-Thane® 95A Polyurethane

Part Number & Color Code	Packaging Unit Size	OD	ID	Wall	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C	150°F/65°C			
1J-157- ___	50' Bag	1/8"	.066"	.030"	01 04 05 06 07 08 10 11 12 14 25 26 27 28	255 PSI	100 PSI	.44	1/4"	B, PI
1L-157- ___	250' Box									
1C-157- ___	500' Reel									
1B-157- ___	1000' Reel									
1A-157- ___	2500' Reel									
1J-156- ___	100' Bag	5/32"	3/32"	.031"	01 04 05 06 07 08 09 10 11 12 25 26 27 28 37	210 PSI	85 PSI	.62	3/8"	B, PI
1C-156- ___	500' Reel									
1B-156- ___	1000' Reel									
1A-156- ___	2500' Reel									
1J-107- ___	100' Bag	3/16"	.107"	.040"	01 07 08 10 37	220 PSI	90 PSI	.92	3/8"	B, PI
1B-107- ___	1000' Reel									
1A-107- ___	2000' Reel									
1J-169- ___	100' Bag	1/4"	1/8"	.062"	01 05 06 07 08 10 11 25 26 27 29	265 PSI	105 PSI	1.83	1/2"	B, PI
1B-169- ___	500' Reel									
1A-169- ___	1000' Reel									
1J-151- ___	100' Bag	1/4"	.160"	.045"	01 04 05 06 07 08 09 10 11 25 26 27 28	175 PSI	70 PSI	1.44	1/2"	B, PI, FX
1B-151- ___	500' Reel									
1A-151- ___	1000' Reel									
1J-152- ___	100' Bag	3/8"	.245"	.065"	01 05 06 07 08 10 11 25 27 28 46	170 PSI	70 PSI	3.15	7/8"	B, PI, FX
1A-152- ___	500' Reel									
1J-161- ___	50' Bag	15/32"	5/16"	.079"	01 05 07 08 10 27	155 PSI	60 PSI	4.83	1-1/8"	B, PI
1A-161- ___	250' Reel									
1J-166- ___	50' Bag	1/2"	.320"	.090"	01 05 07 10 27	175 PSI	70 PSI	5.77	1-1/8"	B, PI
1A-166- ___	250' Reel									
1J-163- ___	50' Bag	9/16"	3/8"	.094"	01 07 08 10 27	155 PSI	60 PSI	6.85	1-3/8"	B, FX
1A-163- ___	200' Reel									
1A-176- ___	150' Reel	3/4"	.467"	.142"	01 07 10 27	175 PSI	70 PSI	13.47	1-1/2"	B, FX
1E-176- ___	Cut Length									

Ether-based Fre-Thane® is the most versatile tubing. Highly flexible with excellent memory, it has the most variation possibilities of any of our tubing and is available in a rainbow of colors.

### Metric Sizes

Part Number & Color Code	Packaging Unit Size	OD mm	ID mm	Wall mm	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C	150°F/65°C			
1J-171- ___	100' Bag	3	1.8	.6	01 10	230 PSI	90 PSI	.35	6.4 mm	B, PI
1C-171- ___	500' Reel									
1B-171- ___	1000' Reel									
1A-171- ___	2500' Reel									
1J-156- ___	100' Bag	4	2.4	.8	01 04 05 06 07 08 09 10 11 12 25 26 27 28 37	210 PSI	85 PSI	.62	9.5 mm	B, PI
1C-156- ___	500' Reel									
1B-156- ___	1000' Reel									
1A-156- ___	2500' Reel									
1J-158- ___	100' Bag	6	4	1	01 05 06 07 08 09 10 11 25 27 37	160 PSI	65 PSI	1.21	12.7 mm	B, PI
1B-158- ___	500' Reel									
1A-158- ___	1000' Reel									
1J-159- ___	100' Bag	8	5	1.5	01 05 07 08 10 11 25 27 37	190 PSI	75 PSI	2.36	19 mm	B, PI
1A-159- ___	500' Reel									
1J-160- ___	50' Bag	10	6.5	1.75	01 05 07 08 10	170 PSI	70 PSI	3.51	22.2 mm	B, PI
1A-160- ___	500' Reel									
1J-161- ___	50' Bag	12	8	2	01 05 07 08 10 27	155 PSI	60 PSI	4.83	28.6 mm	B, PI
1A-161- ___	250' Reel									
1J-162- ___	50' Bag	16	11	2.5	01	150 PSI	60 PSI	4.85	76.2 mm	B, PI
1A-162- ___	200' Reel									

Variations Available:

Coiling • Colors • Cutting • Bonding • Printing • Packaging • Sizes