

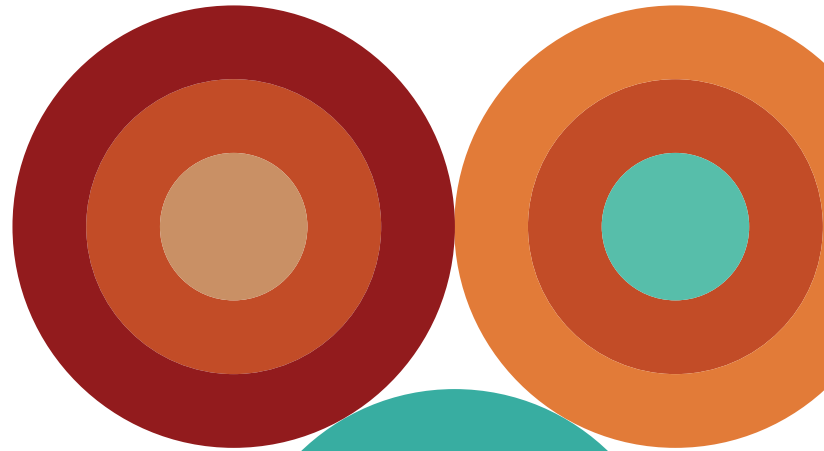
Freelin-Wade® Company sets the standard for quality plastic tubing. All of our tubing is made in the USA. Combined with our industry leading manufacturing expertise, rapid delivery, limitless product variations, and value added services. We can meet any of your plastic tubing requirements. Our customer service team is ready to help you find exactly the right tubing solution for your project. Find out how easy it is to do business with Freelin-Wade. Check us out online or call us today.

Virtually everything in this catalog is available to ship within 24 hours of your order.

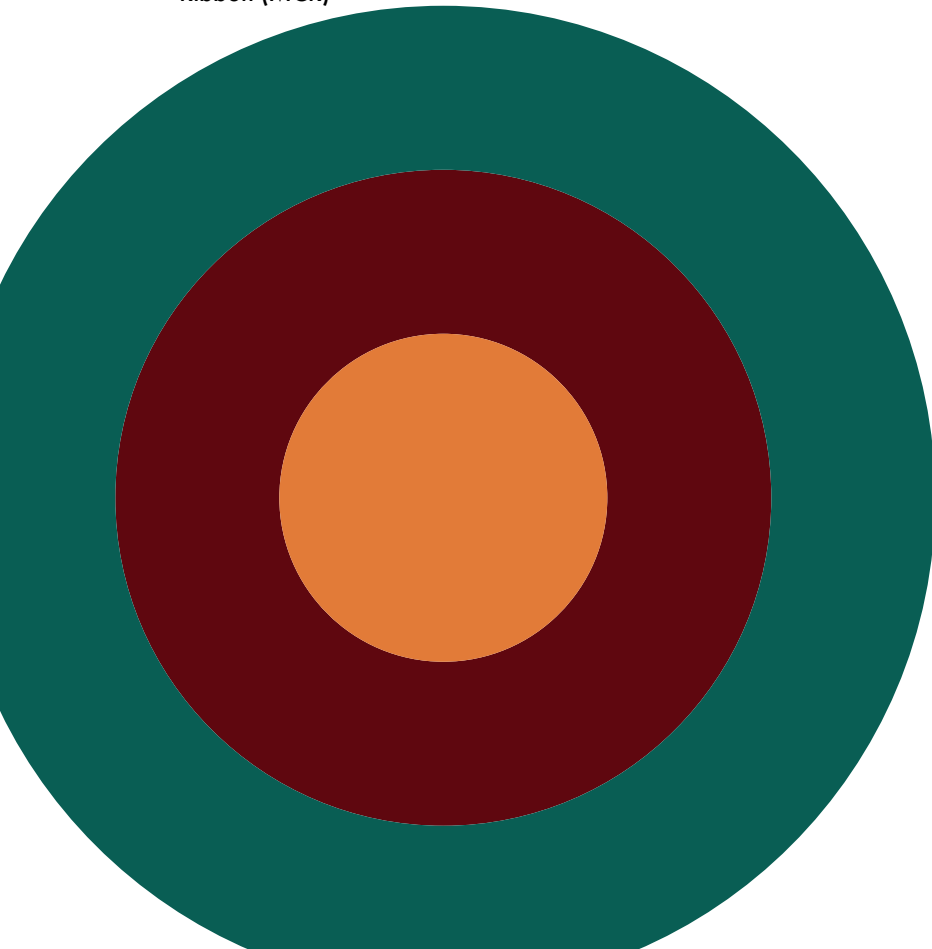
New in this catalog:

- Metric Multi Colored Ribbon
- Metric Fre-Thane® coils
- Spatter Guard SRT
- Additional packaging options
- New stock colors

All Freelin-Wade tubing is made in the USA.



On the cover:
Abuse-Proof
Fre-Thane®
Polyurethane
Multi-Colored
Ribbon (MCR)



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Items in this catalog may vary in appearance from what is pictured or illustrated. Always request a manufactured product sample to assure accuracy.

Product descriptions, specifications and availability may change without notice.

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Variations

Variations are easy! Most of the items in this catalog can be easily altered to meet your individual needs. More importantly, there's no minimum order quantity.

Variations

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Polyurethane: PUR

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

Polyurethane

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Polyvinyl Chloride: PVC

Clear, lightweight and highly flexible, PVC is the choice for hospital and food grade applications. Available in standard tubing and in a reinforced hose.

PVC

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Polyethylene, Polypropylene & Liquiflex-POE™

All of our polyethylene is now linear low density. Check out our new, very flexible Liquiflex-POE. All are chemical resistant and FDA compliant for food contact.

Polyethylene

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Nylon

Our strong, lightweight and flexible nylon is a great choice when you need tubing that resists heat, light and corrosion.

Nylon

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Specialty Tubing

Freelin-Wade manufactures a variety of tubing options including Kynar®, FEP, Static Dissipative and our new Spatter Guard SRT. We also manufacture the industry leading Multi-Colored Ribbon (MCR).

Specialty

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Coiled Tubing & Hoses

In addition to our famous Flexeel® brand hoses, Freelin-Wade offers a variety of coiled and straight tubing and hoses including Purflex, Flexi-Corr & Asepsi-Flex. For a limited time, we are still offering our Multi-Bore tubing as well.

Coils-Hoses

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Jacketing & Accessories

Everything you need to cut, clip and channel your tubing.

Accessories

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Chemical Resistance Guide & Index

Guidelines regarding chemical interactions with our major tubing types.
Part number index.

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Variations

Variations are easy and there is no minimum order quantity. Freelin-Wade sets the industry standard for fast turnaround.

This catalog describes our wide selection of standard tubing, hose and accessories. We also manufacture what we call “variations.” Most variations involve taking our in-stock tubing and personalizing it to our customer’s specifications. This includes coiling, bonding, cutting, special packaging or printing. Let us engineer a custom size, shape or color for your specific application.

Assembly

Most of our tubing comes without fittings. If you would like your tubing to come with fittings, let us know. We have the equipment and personnel to make assembly a fast and efficient process.

Bonding

Freelin-Wade has developed a special bonding process that can combine two or more tubes of any size and color. Just pick your tubing and have us bond them. It will make your work area more organized and simplify the task of line tracing. Bonding also makes your lines look more professional and user-friendly.

Coextrusion

With our coextrusion capabilities, you are no longer limited to the properties of one tube. For example, you can have the flexibility of Polyurethane and the chemical resistance of Nylon.

Coiling

A coil is an excellent way to keep your workstations organized and safe while maximizing working length. We offer several standard coils in this catalog but it’s easy for us to make a variation. Refer to page 33 for a list of coiling terminology.

Colors

In addition to our 28 stock colors, it’s easy for us to match virtually any color you can dream up. Just send us a swatch of what you want us to match. It’s simple, and we’re the fastest in the industry at turning color variations around.

Cutting

We have the right equipment and are set up to precisely cut our tubing in an efficient and cost-effective manner. If you need your tubing cut into specific lengths, then save time, money and reduce waste by having us cut the tubing for you.

Jacketing

If you want to route wire with your tubing or bundle a variety of tubes and wires together, ask us how we can help. For short lengths, we can pull the tubing and wire through the jacket material. For longer lengths we can extrude a jacket over the top.

Packaging

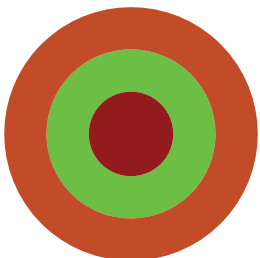
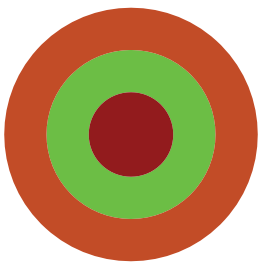
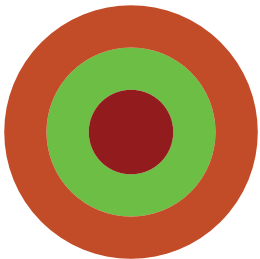
Our standard packaging process is to put short lengths in bags while longer lengths come on reels or in boxes. Other packaging options are available. Just ask!

Printing

Freelin-Wade can print your custom specs on any order over 5,000 feet for free, or a nominal charge for smaller orders. The print is usually text but we also have graphics capabilities.

Sizes

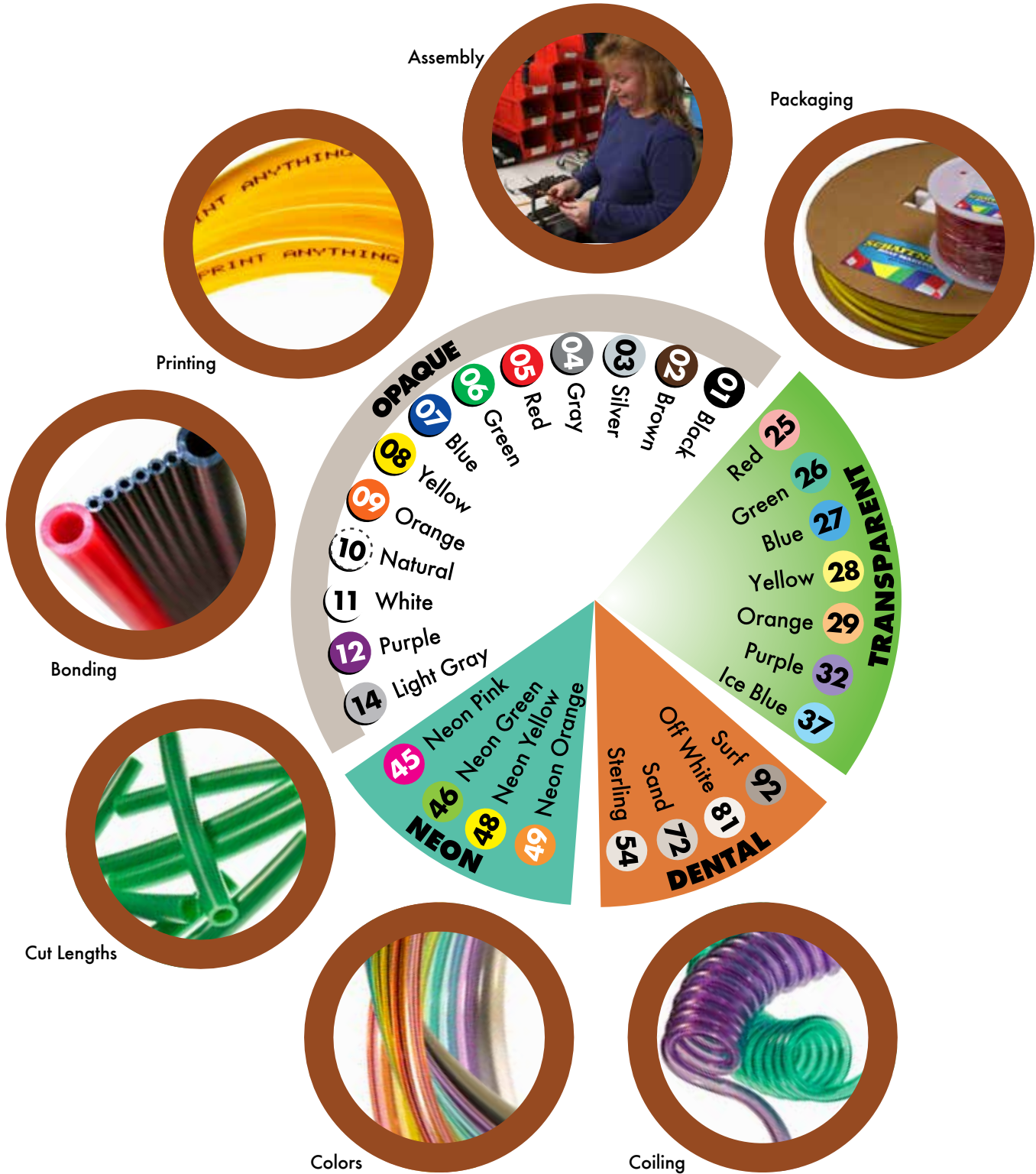
Don’t see the tube dimensions that you need? We have most dies already made, as well as an in-house die shop. We’re happy to extrude exactly the tube that you need.



Lead Time

The majority of our catalog items are available for shipment within 24 hours of your order. Our general lead times for variations using stock tubing are:

- Coil variations - next day
- Cut lengths - 3 days
- Custom printing - 3 days
- Bonding variations - 2 weeks
- Custom extrusions - 3 weeks



Off-Catalog Plastics

In addition to our standard stock, on a daily basis we work with 13 other resin formulas. If you are looking for something a bit different than our standard tubing resin, call us. We can provide you with a solution to meet your needs. Below is our list of non-catalog polymers, along with some of the properties of each:

Nylon 11 - Semi-Rigid FDA: FDA 21 CFR 177.1500(5.2). This is a Nylon 11 for contact with food.

PEBAX: This is a special nylon/polyurethane hybrid material.

Polyester: This rigid material has some properties that make it similar to Nylon.

PUR 80A: This material is stiffer than our 70A but more flexible than our 85A.

PUR 80A - NSF: This material is similar to the 80A but the resin complies with NSF 61 (potable water systems).

PUR 80A - Medical: This is a medical grade polyurethane.

PUR 85A - F/R: This is a fire-retardant grade of Polyurethane in 85A durometer.

PUR 90A - F/R: Fire-retardant, similar to above but in the 90A durometer.

PUR 85A - Ester: Our standard polyurethanes are Ether-based polymers. The Ester is slightly better at handling oil but degrades quickly if exposed to water.

PUR 90A - Ester: Similar properties as above but in the 90A durometer.

PUR 55D: This Shore-D durometer polyurethane is significantly stiffer than our PUR 95A.

PVC 85A Matte: This is a non-glossy PVC material.

TPE 80A: A thermoplastic alternative to rubber.

Standard Packaging Options

- A Standard Bulk Cardboard Reel**
21" diameter x 6" wide with 1" I.D. center hub.
- AA Double Wide Bulk Cardboard Reel**
Same size as "A" reel except 12" wide with an open hub.
- B Medium Plastic Reel**
10.5" diameter x 6" wide with 3/4" I.D. center hub.
- C Small Plastic Reel**
6.5" diameter x 6" wide with 3/4" I.D. center hub.
- D, L Dispenser Boxes**
- E Cut Lengths**
- J Plastic Bag**



Not Just our Green Tubing is Green

At Freelin-Wade, reducing, recycling and reusing are ingrained into our culture.

Office:

Employees recycle virtually all paper and other office waste. In addition, we continue to make strides toward going “paperless”.

Manufacturing:

We recycle our scrap in-house and throughout our operation. This dramatically cuts our waste and reduces our footprint on the environment.

Freelin-Wade utilizes mechanical and electronic filtering systems to remove oil particulates from smoke generated during production operations before exhausting to the atmosphere.

Water Usage:

Freelin-Wade uses chilled filtered water to cool its extruded products. This water is recycled during the production process and is regularly drained. Independent tests ensure that no contaminants are released.

Chemicals:

Freelin-Wade recycles/destroys its machine oils & hazardous waste chemicals through licensed companies in accordance with EPA guidelines.

Warranty

Freelin-Wade warrants its products against defects of workmanship and/or material for 30 days from the date of sale. Freelin-Wade Company is not liable for consequential or other damages including, but not limited to personal injury, damage, loss, or any other expense directly or indirectly arising from the use of, or inability to use, its products either separately or in combination with other products. All other warranties expressed or implied, whether oral or written, including but not limited to warranties for fitness or merchantability for a particular purpose are expressly excluded.

Though many of the base resins that Freelin-Wade uses comply with various FDA, NSF and other regulations, Freelin-Wade encourages user testing, especially for manufacturers of products and/or devices used in food, drug and biological

Die Cleaning:

Freelin-Wade utilizes a high temperature, zero emission burn-off oven to remove plastic film left on tooling. This system eliminates any particulates entering the atmosphere.

Contaminated Plastic Materials:

Freelin-Wade recycles waste plastic with licensed plastic recycling companies. Small amounts of contaminated materials are land filled under EPA guidelines.



applications as regulations and criteria for certification of these products and/or devices vary widely. The responsibility for determining the validity and suitability of use of a Freelin-Wade product in any product or device application is that of the user. We will gladly provide samples for user testing.

This warranty is limited to replacement of the product or an account credit in the amount of the original selling price, at the option of Freelin-Wade Company. All product presumed to be defective must be returned by prepaid transportation to Freelin-Wade Company, together with information describing the product's performance. All returns require prior authorization by Freelin-Wade Company. All specifications are subject to change without notice. While accuracy is thought reliable, no guarantee is expressed or implied.

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



Polyurethane 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, we manufacture our Fre-Thane® polyurethane tubing using the Ether-based material.

Freelin-Wade's 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.

Freelin-Wade began manufacturing polyurethane tubing in 1980. It remains our flagship product today. It is available in 23 standard colors and a virtually infinite number of color variations. Fre-Thane® is Freelin-Wade's most versatile product, with more options and variations available than with any other tubing.

* Source: www.madehow.com



Fre-Thane Polyurethane Colors

Any 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	250' Box	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	500' Reel									
1C-157- ___ 500' Reel	1000' Reel									
1B-157- ___ 1000' Reel	2500' Reel									
1J-156- ___ 100' Bag	500' Reel	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	1000' Reel									
1B-156- ___ 1000' Reel	2500' Reel									
1A-156- ___ 2500' Reel										
1J-107- ___ 100' Bag	1000' Reel	3/16"	.107"	.040"	01 07 08 10 37	220 PSI	90 PSI	.92	3/8"	B, PI
1B-107- ___ 1000' Reel	2000' Reel									
1A-107- ___ 2000' Reel										
1J-169- ___ 100' Bag	500' Reel	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	1000' Reel									
1A-169- ___ 1000' Reel										
1J-151- ___ 100' Bag	500' Reel	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	1000' Reel									
1A-151- ___ 1000' Reel										
1J-152- ___ 100' Bag	500' Reel	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	250' Reel	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	250' Reel	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	200' Reel	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	Cut Length	3/4"	.467"	.142"	01 07 10 27	175 PSI	70 PSI	13.47	1-1/2"	B, FX
1E-176- ___										

Our Ether-based Fre-Thane® is our 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	500' Reel	3	1.8	.6	01 10	230 PSI	90 PSI	.35	6.4 mm	B, PI
1C-171- ___ 500' Reel	1000' Reel									
1B-171- ___ 1000' Reel	2500' Reel									
1A-171- ___ 2500' Reel										
1J-156- ___ 100' Bag	500' Reel	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	1000' Reel									
1B-156- ___ 1000' Reel	2500' Reel									
1A-156- ___ 2500' Reel										
1J-158- ___ 100' Bag	500' Reel	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	1000' Reel									
1A-158- ___ 1000' Reel										
1J-159- ___ 100' Bag	500' Reel	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	500' Reel	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	250' Reel	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	200' Reel	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

USA & International: 503-434-5561

US Toll Free: 888-373-9233



Fre-Thane® 90A 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-132- ___	100' Bag									
1B-132- ___	500' Reel	1/4"	.159"	.046"	01 07 08 10 14 25 27	135 PSI	55 PSI	1.43	5/8"	B
1A-132- ___	1000' Reel									
1J-045- ___	100' Bag									
1B-045- ___	500' Reel	1/4"	.170"	.040"	01 10	115 PSI	45 PSI	1.29	3/4"	B Low Pressure Only
1A-045- ___	1000' Reel									
1J-153- ___	100' Bag	1/4"	3/16"	.031"	10	90 PSI	35 PSI	1.06	1-1/8"	B Low Pressure Only
1A-153- ___	1000' Reel									
1J-005- ___	100' Bag									
1B-005- ___	250' Reel	3/8"	.245"	.065"	01 05 07 10 11 25 27	125 PSI	50 PSI	3.1	3/4"	B
1A-005- ___	500' Reel									
1J-111- ___	50' Bag	1/2"	3/8"	.062"	01 05 10	90 PSI	35 PSI	4.2	2"	B Low Pressure Only
1A-111- ___	250' Reel									

Variations Available: Coiling • Colors • Cutting • Bonding • Printing • Packaging • Sizes

Fre-Thane® 85A 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-013- ___	50' Bag									
1L-013- ___	250' Box									
1C-013- ___	500' Reel	1/8"	.066"	.030"	01 02 04 05 06 07 08 09 10 11 12 14 25 26 27 28 29 32 45 46	135 PSI	55 PSI	.43	3/16"	B
1B-013- ___	1000' Reel									
1A-013- ___	2500' Reel									
1J-134- ___	100' Bag									
1C-134- ___	500' Reel	5/32"	3/32"	.031"	01 10	115 PSI	45 PSI	.60	3/8"	B
1A-134- ___	2500' Reel									
1J-030- ___	100' Bag									
1C-030- ___	500' Reel	5/32"	5/64"	.039"	01 05 06 07 10 27	155 PSI	60 PSI	.70	3/8"	B
1B-030- ___	1000' Reel									
1A-030- ___	2500' Reel									
1J-194- ___	100' Bag									
1B-194- ___	500' Reel	3/16"	1/8"	.031"	01 10	85 PSI	35 PSI	.74	1/2"	B Low Pressure Only
1A-194- ___	2000' Reel									
1J-025- ___	50' Bag									
1D-025- ___	100' Box	1/4"	1/8"	.062"	01 04 05 06 07 08 09 10 11 25 26 27 28	145 PSI	60 PSI	1.8	1/2"	B
1B-025- ___	500' Reel									
1A-025- ___	1000' Reel									
1J-149- ___	100' Bag	5/16"	3/16"	.062"	01 10	110 PSI	45 PSI	2.4	5/8"	B Low Pressure Only
1A-149- ___	500' Reel									
1J-015- ___	100' Bag	3/8"	1/4"	.062"	10 25 26 27	90 PSI	35 PSI	3.0	3/4"	B
1A-015- ___	500' Reel									

Variations Available: Coiling • Colors • Cutting • Bonding • Printing • Packaging • Sizes

Fre-Thane® 70A 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-133- ___	100' Bag									
1B-133- ___	500' Reel	1/4"	1/8"	.062"	01 10 14 25 26 27 29	60 PSI	30 PSI	1.69	1/2"	B
1A-133- ___	1000' Reel									
1J-170- ___	100' Bag	3/8"	1/4"	.062"	07 10	50 PSI	25 PSI	2.82	3/4"	B
1A-170- ___	500' Reel									

Variations Available: Coiling • Colors • Cutting • Bonding • Printing • Packaging • Sizes

Freelin-Wade's non-reinforced flexible PVC uses a non-phthalate plasticizer. We pioneered the use of this environmentally friendly material in the plastic tubing industry.

Freelin-Wade's PVC has a smooth interior and exterior which prevents sediment accumulation, making it well-suited for the food & beverage, medical and pharmaceutical industries.

Our reinforced PVC hose has an open weave innerbraid for increased working pressures up to 250 PSI. The smooth-bore, full-flow I.D. dimensions are sized to fit standard commercial barbed fittings.



Flexible PVC

Specifications

Temperature Range
All Diameters:
-30°F to +150°F

Vacuum Rating
Reinforced PVC:
To 18" Hg.

Hardness
80A Durometer

Working Pressure
3:1 Safety Factor

Resin Compliance
Non Reinforced PVC
FDA for Food Contact
CA Prop. 65
Meets USPVI
Testing Requirements

Suggested Fittings
Barb

Flexible PVC Colors

Flexible PVC is currently stocked only in clear. Our Non Reinforced PVC tubing products listed on this page are available in the colors shown below. Please allow three weeks to fulfill your order.



Non-Phthalate Polyvinyl Chloride: PVC

Part Number & Color Code	Packaging Unit Size	OD	ID	Wall	Standard Color	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C	150°F/65°C			
1J-700-10	100' Bag	1/8"	1/16"	.031"	10	145 PSI	20 PSI	.51	3/8"	B
1A-700-10	2500' Reel									
1J-701-10	100' Bag	1/4"	1/8"	.062"	10	165 PSI	25 PSI	2	1/2"	B
1A-701-10	1000' Reel									
1J-702-10	100' Bag	1/4"	0.17"	0.04	10	95 PSI	10 PSI	1.75	1"	B
1A-702-10	1000' Reel									
1J-703-10	100' Bag	5/16"	3/16"	.062"	10	110 PSI	15 PSI	2.6	5/8"	B
1A-703-10	500' Reel									
1J-704-10	100' Bag	3/8"	1/4"	.062"	10	91 PSI	15 PSI	3.25	7/8"	B
1A-704-10	500' Reel									
1J-705-10	100' Bag	1/2"	3/8"	.062"	10	57 PSI	10 PSI	4.55	1-3/4"	B
1A-705-10	500' Reel									
1A-706-10	100' Reel	3/4"	1/2"	.125"	10	63 PSI	15 PSI	13.01	1-1/4"	B

Variations Available:

Colors • Cutting • Bonding • Printing • Packaging • Sizes

Part Number & Color Code	Packaging Unit Size	OD	ID	Wall	Available Only in Clear	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C	150°F/65°C			
1J-750-10	100' Length	.438"	1/4"	.094"	10	250 PSI	125 PSI	5.38	1"	B
1J-751-10	100' Length	.594"	3/8"	.110"	10	225 PSI	110 PSI	8.83	1-1/4"	B
1J-752-10	100' Length	.750"	1/2"	.125"	10	200 PSI	100 PSI	13.01	2-1/4"	B
1J-753-10	100' Length	1.025"	3/4"	.137"	10	150 PSI	75 PSI	20.32	3-1/4"	B
1J-754-10	100' Length	1.312"	1"	.156"	10	125 PSI	60 PSI	30.01	5"	B
1J-755-10	100' Length	1.656"	1-1/4"	.203"	10	100 PSI	50 PSI	49.11	6-1/2"	B
1J-756-10	100' Length	1.937"	1-1/2"	.218"	10	100 PSI	50 PSI	62.52	8-1/2"	B
1J-757-10	100' Length	2.5"	2"	.250"	10	75 PSI	35 PSI	93.66	10"	B

Variations Available:

Cutting • Printing • Bonding • Packaging • Sizes

Polyethylene, Polypropylene & Liquiflex-POE™

Linear Low Density Polyethylene – LLDPE

Specifications

Temperature Range

LLDPE & Liquiflex: -40°F to +150°F
 PP: -40°F to +165°F

Vacuum Rating

All: To 28" Hg.

Diameter Tolerance

LLDPE: ±.004"
 Liquiflex & PP: ±.005"

Hardness

LLDPE: 50 Shore D
 Liquiflex: 92A
 PP: 95R

Tube Markings

LLDPE & Liquiflex: FW Specifications
 PP: None

Working Pressure

LLDPE & Liquiflex: 3:1 Safety Factor
 PP: 4:1 Safety Factor

Resin Compliance

LLDPE: FDA, NSF51
 Liquiflex & PP: FDA

LLDPE's greatest advantage over low density polyethylene is its superior environmental stress crack resistance (ESCR). Environmental stresses that can shorten the service life of tubing include: chemical exposure, aging, ultraviolet light, connection to barb-type fittings, or high vibration connections with compression fittings. All colors comply with FDA regulation 21 CFR 177.1520(c) for food contact applications. Freelin-Wade has chosen to standardize on linear low density polyethylene and no longer offers low density polyethylene.

Features

- Greater tensile strength
- High burst pressure
- Superior stress and crack resistance
- Tasteless and odorless
- Puncture resistance
- Impermeable to gasses and moisture
- Superior dielectric properties
- Lightweight

Polyethylene Colors

Any of our polyethylene tubing products listed on page 13 are available in the colors shown below. If not shown as a standard item, please allow three weeks to fulfill your order. Due to LLDPE manufacturing restrictions, these color variations require a 3,000 foot minimum.



Polypropylene

Defies staining, holds out moisture & resists stress cracking. Our stock color is bright white but we can match virtually any color as a variation. When colored, the polypropylene holds its color extremely well in all kinds of environments, including under UV light sources, like bright sunlight. Our polypropylene plastic tubing is both extremely strong and lightweight. The tubing is available coiled, cut to length and in your requested packaging.

Liquiflex-POE™

Similar to LLDPE with:

- Greater flexibility
- UV Resistant
- Makes an excellent coil
- Can be bonded

Freelin-Wade has developed a new polyolefin tube that is more flexible than the polyethylene that you've seen before. It has all of the chemical resistant properties of LLDPE and is an excellent choice for conveying liquids. Note that it has low pressure ratings, particularly in warm environments.



Liquiflex-POE™

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-961- ___	100' Bag	1/4"	1/8"	.062"	01 05 07 10	125 PSI	75 PSI	1.52	.75"	B, PI, C
1C-961- ___	500' Reel									
1B-961- ___	1000' Reel									
1A-961- ___	2500' Reel	1/4"	.170"	.040"	01 05 07 10	80 PSI	20 PSI	1.08	1.375"	B, PI, C
1J-962- ___	100' Bag									
1C-962- ___	500' Reel									
1A-962- ___	1000' Reel	3/8"	.245"	.062"	01 05 07 10	75 PSI	35 PSI	2.56	1.5"	B, PI, C
1J-963- ___	100' Bag									
1A-963- ___	500' Reel									
1J-964- ___	50' Bag	1/2"	3/8"	.062"	01 05 07 10	60 PSI	25 PSI	3.52	2.75"	B, PI, C
1A-964- ___	250' Reel									

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

Polypropylene

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-051- ___	100' Bag	1/4"	.170"	.040"	11	325 PSI	150 PSI	1.5	1.25"	PI, C
1A-051- ___	1000' Reel									
1J-052- ___	100' Bag	3/8"	1/4"	.063"	11	350 PSI	135 PSI	3.0	1.75"	PI, C
1A-052- ___	500' Reel									
1J-053- ___	100' Bag	1/2"	3/8"	.063"	11	250 PSI	125 PSI	4.0	3.25"	PI, C
1A-053- ___	250' Reel									

Variations Available: Coiling • Colors • Cutting • Packaging • Jacketing

Polyethylene (Linear Low Density: LLDPE)

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-109- ___	100' Bag	1/8"	.062"	.031"	01 04 05 06 07 08 09 10	305 PSI	120 PSI	.40	1/2"	PI, C
1L-109- ___	250' Box									
1C-109- ___	500' Reel									
1B-109- ___	1000' Reel									
1A-109- ___	2500' Reel									
1J-189- ___	100' Bag	5/32"	.106"	.025"	01 05 06 07 08 10	175 PSI	70 PSI	.46	1"	PI, C
1L-189- ___	250' Box									
1C-189- ___	500' Reel									
1B-189- ___	1000' Reel									
1A-189- ___	2500' Reel									
1J-048- ___	100' Bag	1/4"	.170"	.040"	01 04 05 06 07 08 09 10 12	200 PSI	80 PSI	1.2	1-1/4"	PI, C
1B-048- ___	500' Reel									
1A-048- ___	1000' Reel									
1J-077- ___	100' Bag	5/16"	.187"	.062"	01 05 06 07 08 10	230 PSI	90 PSI	2.5	1-1/2"	PI, C
1A-077- ___	500' Reel									
1J-074- ___	100' Bag	3/8"	.250"	.062"	01 04 05 06 07 08 09 10	190 PSI	75 PSI	2.76	2"	PI, C
1A-074- ___	500' Reel									
1J-076- ___	100' Bag	1/2"	.375"	.062"	01 05 06 07 08 09 10	135 PSI	55 PSI	3.87	2-1/2"	PI, C
1A-076- ___	250' Reel									
1AA-076- ___	500' Reel									
1A-086- ___	100' Reel	5/8"	.500"	.062"	01 10	100 PSI	40 PSI	5	3"	PI, C
1AA-086- ___	300' Reel									

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-189- ___	100' Bag	4	2.7	.65	01 05 06 07 08 10	175 PSI	70 PSI	.46	25.2 mm	PI, C
1L-189- ___	250' Box									
1C-189- ___	500' Reel									
1B-189- ___	1000' Reel									
1A-189- ___	2500' Reel									
1J-071- ___	100' Bag	6	4	1	01 07 10	175 PSI	70 PSI	1.1	31.8 mm	PI, C
1B-071- ___	500' Reel									
1A-071- ___	1000' Reel									
1J-072- ___	100' Bag	8	6	1	01 05 07 10	140 PSI	55 PSI	1.5	38 mm	PI, C
1A-072- ___	500' Reel									
1J-073- ___	100' Bag	10	8	1	01 07 10	115 PSI	45 PSI	2.1	51 mm	PI, C
1A-073- ___	500' Reel									
1J-075- ___	100' Bag	12	9	1.5	01 07 10	135 PSI	55 PSI	3.44	63 mm	PI, C
1A-075- ___	250' Reel									
1AA-075- ___	500' Reel									

Variations Available:

Colors • Cutting • Printing • Packaging • Sizes

Nylon

Specifications

Temperature Range
-60°F to +200°F

Vacuum Rating
To 28" Hg

Diameter Tolerance
<1/2"± .004"
>1/2"± .005"

Hardness
78 Rockwell R

Tube Markings
FW Specifications

Working Pressure
4:1 Safety Factor

UV Stabilized
Yes

Resin Compliance
Meets UL94HB
Testing Requirements

Suggested Fittings
Push-In, Compression

Nylon tubing (also referred to as polyamide) can withstand higher temperatures, making it an ideal choice for a wide variety of applications. When compared to other Nylon resins, Freelin-Wade's tubing allows for a lighter weight wall, greater flexibility and smaller bend radius. It is also more corrosion resistant than other types of Nylon tubing because of its ability to absorb less moisture. Its heat and UV stabilization makes it resistant to stress-cracking, so it works well in sunny areas. It is chemical resistant which makes it a good choice in areas where exposure to certain chemicals is a possibility.

Freelin-Wade manufactures nylon tubing from a variety of resins and there are any number of variations possible. We are happy to match any color you need, configure a coil, bond two tubes, print and cut to length. Freelin-Wade can make a nylon tube to meet your needs.

Features

- Strong, lightweight and flexible.
- Dimensionally stable.
- Heat and light stabilized.
- Resistant to corrosion and stress-cracking.



Nylon Colors

Any of our nylon tubing products listed on page 15 are available in the colors shown below. If not shown as a standard item, please allow three weeks to fulfill your order.



Nylon

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-247- ___ 100' Bag 1A-247- ___ 2500' Reel		1/8"	.079"	.023"	01 10	420 PSI	250 PSI	.35	3/8"	PI, C
1J-200- ___ 100' Bag 1C-200- ___ 500' Reel 1B-200- ___ 1000' Reel 1A-200- ___ 2500' Reel		1/8"	.093"	.016"	01 05 06 07 08 10	270 PSI	160 PSI	.25	1/2"	PI, C
1J-201- ___ 100' Bag 1C-201- ___ 500' Reel 1B-201- ___ 1000' Reel 1A-201- ___ 2500' Reel		5/32"	.106"	.025"	01 03 05 06 07 08 09 10 12	350 PSI	210 PSI	.51	1/2"	PI, C
1J-202- ___ 100' Bag 1B-202- ___ 500' Reel 1A-202- ___ 2000' Reel		3/16"	.138"	.025"	01 05 06 07 08 10	260 PSI	160 PSI	.55	5/8"	PI, C
1J-214- ___ 100' Bag 1A-214- ___ 1000' Reel		1/4"	.125"	.062"	01 10	590 PSI	350 PSI	1.77	3/8"	PI, C
1J-203- ___ 100' Bag 1B-203- ___ 500' Reel 1A-203- ___ 1000' Reel		1/4"	.170"	.040"	01 03 05 06 07 08 09 10	330 PSI	200 PSI	1.27	3/4"	PI, C
1J-204- ___ 100' Bag 1B-204- ___ 500' Reel 1A-204- ___ 1000' Reel		1/4"	.180"	.035"	01 05 06 07 08 09 10	290 PSI	170 PSI	1.13	1"	PI, C
1J-205- ___ 100' Bag 1A-205- ___ 500' Reel		5/16"	.232"	.040"	01 05 06 07 08 10	240 PSI	140 PSI	1.64	1-1/2"	PI, C
1J-206- ___ 100' Bag 1A-206- ___ 500' Reel		3/8"	.275"	.050"	01 05 06 07 08 10	250 PSI	150 PSI	2.45	1-1/2"	PI, C
1J-207- ___ 100' Bag 1A-207- ___ 250' Reel 1AA-207- ___ 500' Reel		1/2"	.375"	.062"	01 05 06 07 08 10	240 PSI	140 PSI	4.12	2-1/4"	PI, C
1J-213- ___ 50' Bag 1AA-213- ___ 250' Reel		5/8"	1/2"	.062"	01 10	170 PSI	100 PSI	5.30	3-1/4"	PI, C

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-246- ___ 100' Bag 1C-246- ___ 500' Reel 1B-246- ___ 1000' Reel 1A-246- ___ 2500' Reel		3	1.8	.6	01 10	410 PSI	240 PSI	.33	6.3 mm	PI, C
1J-201- ___ 100' Bag 1C-201- ___ 500' Reel 1B-201- ___ 1000' Reel 1A-201- ___ 2500' Reel		4	2.7	.65	01 03 05 06 07 08 09 10 12	350 PSI	210 PSI	.51	12.7 mm	PI, C
1J-241- ___ 100' Bag 1A-241- ___ 1000' Reel		5	3	1	01 05 06 07 08 10	420 PSI	250 PSI	.94	9.5 mm	PI, C
1J-242- ___ 100' Bag 1B-242- ___ 500' Reel 1A-242- ___ 1000' Reel		6	4	1	01 05 06 07 08 10	340 PSI	200 PSI	1.17	17 mm	PI, C
1J-243- ___ 100' Bag 1A-243- ___ 500' Reel		8	6	1	01 05 06 07 08 10	250 PSI	150 PSI	1.64	38 mm	PI, C
1J-244- ___ 100' Bag 1A-244- ___ 500' Reel		10	8	1	01 03 10	190 PSI	110 PSI	2.11	51 mm	PI, C
1J-245- ___ 100' Bag 1A-245- ___ 250' Reel 1AA-245- ___ 500' Reel		12	10	1	01 10	150 PSI	90 PSI	2.55	76 mm	PI, C
1AA-248- ___ 250' Reel		14	11	1	01 10	215 PSI	137 PSI	4	83 mm	PI, C

Variations Available:

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

USA & International: 503-434-5561

US Toll Free: 888-373-9233

Nylon: High Pressure, D.O.T., & Super Soft

Specifications

Temperature Range
 HP: -60°F to +200°F
 SS: -40°F to +180°F
 DOT: -60°F to +200°F

Vacuum Rating
 All: To 28" Hg.

Diameter Tolerances
 HP: < OD .5": ±.003"
 > OD .5": ±.005"
 SS: +.002"/-.004"
 DOT: 1/8" - 1/4": ±.003"
 5/16": ±.004"

Hardness
 HP: 108 Rockwell R
 SS: 57 Shore D
 DOT: 78 Rockwell R

Tube Markings
 HP & SS: FW Specs
 DOT: DOT Specs

Working Pressure
 4:1 Safety Factor

UV Stabilized
 All: Yes

Resin Compliance
 Meets UL94HB Testing Requirements

Suggested Fittings
 Push-In, Compression

High Pressure Nylon

Freelin-Wade's High Pressure Nylon tubing is made from a semi-rigid compound that has outstanding tensile strength and chemical resistance, making it the ideal choice for chemical and oil processing lines, tool lubricating systems and other applications that require a high quality Nylon material with much higher burst ratings.



High Pressure Nylon

Freelin-Wade's Super Soft Nylon 11 tubing is formulated with a special compound to significantly increase flexibility while retaining the outstanding qualities of our standard Nylon tubing. This advantage makes our Super Soft Nylon 11 the ideal choice where media and environmental conditions make polyurethane impractical.

- More flexible than standard Nylon tubing
- Heat and light stabilized.



D.O.T. Nylon

D.O.T. Nylon

D.O.T. tubing is made using our standard Nylon. Type "A" Air Brake tubing is ideal for use on vehicles for instrumentation and pneumatic accessories connected to the air brake system. Type "A" Air Brake tubing is non-reinforced. D.O.T. tubing is available on easy-to-dispense reels. A variety of colors are available. It is heat and light stabilized.

Part Number & Color Code	Packaging Unit Size	OD	Wall	Standard Colors	Burst Pressure 75°F/25°C	lbs./100'	Bend Radius	Fitting
1J-220- ____	100' Bag	1/8"	.023	01 05 07 08 09	1000 PSI	.34	3/8"	PI, C
1C-220- ____	500' Reel							
1B-220- ____	1000' Reel							
1A-220- ____	2000' Reel							
1J-221- ____	100' Reel	5/32"	.032	01 05 06 07 08 09	1200 PSI	.57	1/2"	PI, C
1C-221- ____	500' Reel							
1B-221- ____	1000' Reel							
1A-221- ____	2000' Reel							
1J-222- ____	100' Bag	3/16"	.036	01 05 06 07 08 09	1200 PSI	.77	3/4"	PI, C
1B-222- ____	500' Reel							
1A-222- ____	2000' Reel							
1J-223- ____	100' Bag	1/4"	.040	01 05 06 07 08 09	1200 PSI	1.21	1"	PI, C
1B-223- ____	500' Reel							
1A-223- ____	1000' Reel							
1J-225- ____	100' Bag	5/16"	.040	01 05 06 07 08 09	1000 PSI	1.57	1-1/4"	PI, C
1A-225- ____	500' Reel							

Variations Available:

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

Nylon – High Pressure

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-280- ___ 100' Bag	100' Bag	1/8"	.073"	.026"	10	800 PSI		.39	5/16"	PI, C
1B-280- ___ 500' Reel	500' Reel									
1A-280- ___ 2500' Reel	2500' Reel									
1J-281- ___ 100' Bag	100' Bag	3/16"	.109"	.039"	10	800 PSI		.88	7/16"	PI, C
1B-281- ___ 500' Reel	500' Reel									
1A-281- ___ 2000' Reel	2000' Reel									
1J-282- ___ 100' Bag	100' Bag	1/4"	.150"	.050"	01 10	800 PSI		1.51	9/16"	PI, C
1B-282- ___ 500' Reel	500' Reel									
1A-282- ___ 1000' Reel	1000' Reel									
1J-283- ___ 100' Bag	100' Bag	3/8"	.225"	.075"	01 10	800 PSI		3.39	1"	PI, C
1A-283- ___ 500' Reel	500' Reel									
1A-284- ___ 250' Reel	250' Reel									
1AA-284- ___ 500' Reel	500' Reel	1/2"	.350"	.075"	10	530 PSI		4.81	2"	PI, C

Variations Available:

Coiling • Colors • Cutting • Printing • Packaging • Sizes

Super Soft Nylon

Nylon 11 - Super Soft

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-260- ___ 100' Bag	100' Bag	1/8"	.093"	.016"	01 10	200 PSI	120 PSI	.25	9/16"	PI, C
1C-260- ___ 500' Reel	500' Reel									
1B-260- ___ 1000' Reel	1000' Reel									
1A-260- ___ 2500' Reel	2500' Reel									
1J-261- ___ 100' Bag	100' Bag	5/32"	.106"	.025"	01 10	220 PSI	130 PSI	.45	9/16"	PI, C
1C-261- ___ 500' Reel	500' Reel									
1B-261- ___ 1000' Reel	1000' Reel									
1A-261- ___ 2500' Reel	2500' Reel									
1J-264- ___ 100' Bag	100' Bag	1/4"	.180"	.035"	01 10	180 PSI	110 PSI	1.04	1"	PI, C
1B-264- ___ 500' Reel	500' Reel									
1A-264- ___ 1000' Reel	1000' Reel									
1J-265- ___ 100' Bag	100' Bag	5/16"	.232"	.040"	01 10	170 PSI	100 PSI	1.52	1-1/4"	PI, C
1A-265- ___ 500' Reel	500' Reel									
1J-266- ___ 100' Bag	100' Bag	3/8"	.275"	.050"	01 10	160 PSI	90 PSI	2.26	1-5/8"	PI, C
1A-266- ___ 500' Reel	500' Reel									
1J-267- ___ 100' Bag	100' Bag	1/2"	3/8"	.062"	01 10	140 PSI	80 PSI	3.80	2-1/2"	PI, C
1AA-267- ___ 500' Reel	500' Reel									

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-271- ___ 100' Bag	100' Bag	5	3	1	01 10	310 PSI	180 PSI	.95	12.7	PI, C
1B-271- ___ 500' Reel	500' Reel									
1A-271- ___ 1000' Reel	1000' Reel									
1J-272- ___ 100' Bag	100' Bag	6	4	1	01 10	240 PSI	140 PSI	1.10	19.0	PI, C
1B-272- ___ 500' Reel	500' Reel									
1A-272- ___ 1000' Reel	1000' Reel									
1J-273- ___ 100' Bag	100' Bag	8	6	1	01 10	160 PSI	100 PSI	1.70	23.8	PI, C
1A-273- ___ 500' Reel	500' Reel									
1J-274- ___ 100' Bag	100' Bag	10	8	1	01 10	120 PSI	70 PSI	2.20	28.6	PI, C
1A-274- ___ 500' Reel	500' Reel									
1J-275- ___ 100' Bag	100' Bag	12	10	1	01 10	90 PSI	50 PSI	2.80	38.0	PI, C
1AA-275- ___ 500' Reel	500' Reel									

Variations Available:

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

Kynar® PVDF & FEP

Specifications

Temperature Range
-40° F to +180° F

Vacuum Rating
To 28" Hg

Diameter Tolerance
±.005"

Hardness
65 Shore D

Tube Markings
None

Working Pressure
4:1 Safety Factor

Resin Compliance
FDA, USPVI
CFR 177.2600
UL 94 V0, NSF-51

Suggested Fittings
Push-In, Compression

Kynar® PVDF

Kynar® PVDF compound is an economical alternative to Teflon® (PTFE, PFA, and FEP) tubing for applications not requiring heat resistance. Kynar possesses excellent resistance to a wide range of chemicals. The high purity material is the ideal tubing for a variety of applications requiring an odorless and tasteless tube.

There are multiple grades of Kynar resins available. Some of these are used in rigid pipe applications. Freelin-Wade uses a flexible grade.

For more information about Kynar, refer to the Kynar Website: www.kynar.com
You can also refer to our Chemical Resistance Chart on page 38.

Features

Resists:

- Acids
 - Alcohols
 - Aliphatics
 - Aromatics
 - Mild Bases
 - Chloride
 - Halogen
 - Fungus
 - Out-gassing
 - Radiation
 - UV Light
- Sterilizable by Gamma Radiation or Ozone.
 - Resists fungal growth per MS 810B, Method 508 testing.

Kynar



Specifications

Temperature Range
-100° F to +400° F
-73° to 204° C

Vacuum Rating
To 28" Hg

Diameter Tolerance
±.005"

Hardness
57 Shore D

Tube Markings
None

Working Pressure
4:1 Safety Factor

Resin Compliance
FDA Food Contact
UL 94 V0, USP VI
ASTM D 3296-03

Suggested Fittings
Flare, Compression,
Push-In

Fluorinated Ethylene Propylene – FEP

Freelin-Wade's FEP tubing (compare to DuPont's® Teflon®) is one of the most durable and versatile flexible plastic tubes that you can buy. FEP, or fluorinated ethylene propylene, is an economical choice for applications requiring chemical resistance or exposure to a wide range of temperatures. Freelin-Wade's FEP is extremely flexible, making it an ideal choice for self-retracting coils. FEP is also available in a variety of packaged lengths.

Applications include chemical processing, laboratory applications, medical devices, water purification, food processing and automotive paint spray.

Features

- 100% virgin grade high performance resin designed to resist stress cracking
- Low permeability
- High thermal stability
- Non-flammable/Self-extinguishing
- Superior electrical insulation properties
- Chemically inert to most industrial chemicals and solvents



FEP Coiling: available as a variation

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-681- ___ 100' Bag	100' Bag	1/8"	1/16"	.030"	10	300 PSI	125 PSI	0.71	3/16"	PI, C
1C-681- ___ 500' Reel	500' Reel									
1B-681- ___ 1000' Reel	1000' Reel									
1A-681- ___ 2500' Reel	2500' Reel									
1J-682- ___ 100' Bag	100' Bag	1/4"	.170"	.040"	10	165 PSI	70 PSI	2.03	3/4"	PI, C
1B-682- ___ 500' Reel	500' Reel									
1A-682- ___ 1000' Reel	1000' Reel									
1J-683- ___ 100' Bag	100' Bag	3/8"	1/4"	.062"	10 01	165 PSI	70 PSI	4.72	1-1/4"	PI, C
1A-683- ___ 500' Reel	500' Reel									
1J-684- ___ 100' Bag	100' Bag	1/2"	3/8"	.062"	10	130 PSI	55 PSI	6.61	2-1/8"	PI, C
1A-684- ___ 250' Reel	250' Reel									
1AA-684- ___ 500' Reel	500' Reel									

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-692- ___ 100' Bag	100' Bag	6	4	1	10	195 PSI	115 PSI	1.88	15.9 mm	PI, C
1B-692- ___ 500' Reel	500' Reel									
1A-692- ___ 1000' Reel	1000' Reel									
1J-693- ___ 100' Bag	100' Bag	8	6	1	10	145 PSI	85 PSI	2.63	49 mm	PI, C
1A-693- ___ 500' Reel	500' Reel									
1J-695- ___ 100' Bag	100' Bag	12	10	1	10	90 PSI	55 PSI	4.07	98 mm	PI, C
1A-695- ___ 250' Reel	250' Reel									

Variations Available:

Coiling • Colors • Cutting • Printing • Packaging • Sizes

Fluorinated Ethylene Propylene - FEP

Part Number & Color Code	Packaging Unit Size	OD	ID	Wall	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C				
1J-900- ___ 100' Bag	100' Bag	1/8"	1/16"	.030"	10	300 PSI		0.9	1/2"	PI, C
1C-900- ___ 500' Reel	500' Reel									
1B-900- ___ 1000' Reel	1000' Reel									
1A-900- ___ 2500' Reel	2500' Reel									
1J-901- ___ 100' Bag	100' Bag	1/4"	3/16"	.030"	10	150 PSI		2.0	1"	PI, C
1B-901- ___ 500' Reel	500' Reel									
1A-901- ___ 3000' Reel	3000' Reel									
1J-902- ___ 100' Bag	100' Bag	1/4"	1/8"	.062"	10	300 PSI		3.4	1/2"	PI, C
1B-902- ___ 500' Reel	500' Reel									
1A-902- ___ 1000' Reel	1000' Reel									
1J-903- ___ 100' Bag	100' Bag	3/8"	1/4"	.062"	10	207 PSI		5.7	1"	PI, C
1A-903- ___ 1000' Reel	1000' Reel									
1J-904- ___ 100' Bag	100' Bag	1/2"	3/8"	.062"	10	155 PSI		8.0	2"	PI, C
1A-904- ___ 1000' Reel	1000' Reel									

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				
1J-941- ___ 100' Bag	100' Bag	4	2	1	10	450 PSI		1.4	1.5"	PI, C
1C-941- ___ 500' Reel	500' Reel									
1B-941- ___ 1000' Reel	1000' Reel									
1A-941- ___ 2500' Reel	2500' Reel									
1J-942- ___ 100' Bag	100' Bag	6	4	1	10	350 PSI		2.3	1.75"	PI, C
1B-942- ___ 500' Reel	500' Reel									
1A-942- ___ 2500' Reel	2500' Reel									
1J-943- ___ 100' Bag	100' Bag	8	6	1	10	250 PSI		3.2	2.5"	PI, C
1A-943- ___ 1500' Reel	1500' Reel									
1J-944- ___ 100' Bag	100' Bag	10	8	1	10	200 PSI		4.1	2.75"	PI, C
1A-944- ___ 1500' Reel	1500' Reel									

Variations Available:

Coiling • Cutting • Packaging • Jacketing

Multi-Colored Ribbon (MCR)

Specifications

Temperature Range
-40°F to +165°F

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

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

Tube Markings
None

Working Pressure
3:1 Safety Factor

UV Stabilized
95A & 85A

Resin Compliance
95A: NSF61
Meets UL94HB
85A: NSF61
Meets UL94HB
USPVI

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

Multi-Colored Ribbon tubing (MCR) is a bonded ribbon of multi-colored Fre-Thane® Polyurethane tubing. Any time that you are routing two or more lines, MCR is the way to go. It offers faster installation times and eliminates the need for spiral wrap or jacketing.

Freelin-Wade's proprietary bonding process allows the tubing to be separated without leaving any residue. This ensures a tight, leak free seal with push-in style fittings. MCR is a durable, cost-effective way to color code your tubing lines for identification, tracing or troubleshooting. Additionally, MCR will withstand the rigors of flexing and stretching, just like the rest of our polyurethane tubing.

MCR is available in a wide range of stock configurations which are listed below and to the right. In addition, variations are easy. Freelin-Wade will make MCR to suit your needs. Our unique manufacturing process enables us to bond up to 20 tubes, mixing and matching colors, sizes and configurations.

Common MCR Variations

Features

- Bond 2 to 20 tubes, up to 3.5" wide
- Use multiple colors in any combination.
- Mix or match tube sizes.
- Tubes can be stacked into many configurations.
- Color code your lines making routing and line identification easy.



85A Standard Multi-Colored Ribbon (MCR)

Part Number & Color Code	Packaging Unit Size	OD	ID	Color Arrangement	Working Pressure 75°F/25°C	lbs./100'	Bend Radius	Fitting
2M-013-01-10 2ME-013-01-10	100' Bag Cut Length	1/8"	.066"	01 10	135 PSI	.86	3/16"	B
4M-013-26-28-29-25 4ME-013-26-28-29-25	100' Bag Cut Length	1/8"	.066"	26 28 29 25	135 PSI	1.72	3/16"	B
6M-013-06-07-05-08-09-12 6ME-013-06-07-05-08-09-12	100' Bag Cut Length	1/8"	.066"	06 07 05 08 09 12	135 PSI	2.58	3/16"	B
8M-013-11-04-32-27-26-28-29-25 8ME-013-11-04-32-27-26-28-29-25	100' Bag Cut Length	1/8"	.066"	11 04 32 27 26 28 29 25	135 PSI	3.44	3/16"	B
8M-013-10-10-10-10-10-10-10 8ME-013-10-10-10-10-10-10-10	100' Bag Cut Length			10:10:10:10:10:10:10:10				
2M-025-01-10 2ME-025-01-10	100' Bag Cut Length	1/4"	1/8"	01 10	145 PSI	3.60	1/2"	B
4M-025-26-28-29-25 4ME-025-26-28-29-25	100' Bag Cut Length			26 28 29 25				
4M-025-01-01-01-01 4ME-025-01-01-01-01	100' Bag Cut Length	1/4"	1/8"	01 01 01 01	145 PSI	7.20	1/2"	B
4M-025-10-10-10-10 4ME-025-10-10-10-10	100' Bag Cut Length			10:10:10:10				
6M-025-06-07-05-08-09-12 6ME-025-06-07-05-08-09-12	100' Bag Cut Length	1/4"	1/8"	06 07 05 08 09 12	145 PSI	10.80	1/2"	B
6M-025-10-10-10-10-10-10 6ME-025-10-10-10-10-10-10	100' Bag Cut Length			10:10:10:10:10:10				
8M-025-11-04-32-27-26-28-29-25 8ME-025-11-04-32-27-26-28-29-25	100' Bag Cut Length	1/4"	1/8"	11 04 32 27 26 28 29 25	145 PSI	14.40	1/2"	B

Variations Available:

Coiling • Colors • Cutting • Packaging • Sizes

95A Standard Multi-Colored Ribbon (MCR)

Part Number & Color Code	Packaging Unit Size	OD	ID	Color Arrangement	Working Pressure 75°F/25°C	lbs./100'	Bend Radius	Fitting
2M-157-05-07 2ME-157-05-07	100' Bag Cut Length	1/8"	.066"	05 07	255 PSI	.88	1/4"	B, PI
4M-157-05-07-11-10 4ME-157-05-07-11-10	100' Bag Cut Length	1/8"	.066"	05 07 11 10	255 PSI	1.72	1/4"	B, PI
6M-157-08-06-05-07-11-10 6ME-157-08-06-05-07-11-10	100' Bag Cut Length	1/8"	.066"	08 06 05 07 11 10	255 PSI	2.60	1/4"	B, PI
8M-157-25-27-08-06-05-07-11-10 8ME-157-25-27-08-06-05-07-11-10	100' Bag Cut Length	1/8"	.066"	25 27 08 06 05 07 11 10	255 PSI	3.52	1/4"	B, PI
2M-156-05-07 2ME-156-05-07	100' Bag Cut Length	5/32"	3/32"	05 07	210 PSI	1.24	3/8"	B, PI
4M-156-05-07-11-10 4ME-156-05-07-11-10	100' Bag Cut Length	5/32"	3/32"	05 07 11 10	210 PSI	2.48	3/8"	B, PI
6M-156-08-06-05-07-11-10 6ME-156-08-06-05-07-11-10	100' Bag Cut Length	5/32"	3/32"	08 06 05 07 11 10	210 PSI	3.72	3/8"	B, PI
2M-151-05-07 2ME-151-05-07	100' Bag Cut Length	1/4"	.160"	05 07	175 PSI	2.88	1/2"	B, PI, FX
4M-151-05-07-11-10 4ME-151-05-07-11-10	100' Bag Cut Length	1/4"	.160"	05 07 11 10	175 PSI	5.76	1/2"	B, PI, FX
6M-151-08-06-05-07-11-10 6ME-151-08-06-05-07-11-10	100' Bag Cut Length	1/4"	.160"	08 06 05 07 11 10	175 PSI	8.64	1/2"	B, PI, FX
8M-151-25-27-08-06-05-07-11-10 8ME-151-25-27-08-06-05-07-11-10	100' Bag Cut Length	1/4"	.160"	25 27 08 06 05 07 11 10	175 PSI	11.52	1/2"	B, PI, FX
2M-152-05-07 2ME-152-05-07	100' Bag Cut Length	3/8"	.245"	05 07	170 PSI	6.30	7/8"	B, PI, FX
4M-152-05-07-11-10 4ME-152-05-07-11-10	100' Bag Cut Length	3/8"	.245"	05 07 11 10	170 PSI	12.60	7/8"	B, PI, FX

Metric Sizes

Part Number & Color Code	Packaging Unit Size	OD	ID	Color Arrangement	Working Pressure 75°F/25°C	lbs./100'	Bend Radius	Fitting
2M-156-05-07 2ME-156-05-07	100' Bag Cut Length	4mm	2.4mm	05 07	210 PSI	1.24	9.5mm	B, PI
4M-156-05-07-11-10 4ME-156-05-07-11-10	100' Bag Cut Length	4mm	2.4mm	05 07 11 10	210 PSI	2.48	9.5mm	B, PI
6M-156-08-06-05-07-11-10 6ME-156-08-06-05-07-11-10	100' Bag Cut Length	4mm	2.4mm	08 06 05 07 11 10	210 PSI	3.72	9.5mm	B, PI
2M-158-09-01 2ME-158-09-01	100' Bag Cut Length	6mm	4mm	09 01	160 PSI	2.42	12.7mm	B, PI
4M-158-09-01-11-10 4ME-158-09-01-11-10	100' Bag Cut Length	6mm	4mm	09 01 11 10	160 PSI	4.84	12.7mm	B, PI
2M-159-06-08 2ME-159-06-08	100' Bag Cut Length	8mm	5mm	06 08	190 PSI	4.72	19mm	B, PI
4M-159-06-08-11-10 4ME-159-06-08-11-10	100' Bag Cut Length	8mm	5mm	06 08 11 10	190 PSI	9.44	19mm	B, PI

Variations Available:

Coiling • Colors • Cutting • Packaging • Sizes

95A Multi-Colored Ribbon (MCR) Coils

Part Number & Color Code	OD	ID	Tail Length	Color Arrangement	Working Pressure		Material Length	Working Length	Retracted Length	Coil ID
					75°F/25°C	150°F/65°C				
2MC-156-5 2MC-156-10	5/32"	3/32"	8"	05 07	190 PSI	75 PSI	5' 10'	3.75' 7.5'	3.75" 9"	1" 1"
2MC-151-5 2MC-151-10	1/4"	.160"	8"	05 07	155 PSI	60 PSI	5' 10'	3.75' 7.5'	5.6" 13.25"	1" 1"
2MC-152-5 2MC-152-10	3/8"	.245"	8"	05 07	150 PSI	60 PSI	5' 10'	3.75' 7.5'	5" 11.5"	1.75" 1.75"

Variations Available:

Colors • Cutting • Packaging • Sizes

USA & International: 503-434-5561

US Toll Free: 888-373-9233

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Spatter Guard SRT

Specifications

Temperature Range
-40°F to +165°F

Vacuum Rating
To 28" Hg.

Diameter Tolerances
±.005"

Hardness:
58D

Tube Markings
FW Specifications

Working Pressure
3:1 Safety Factor

Resin Compliance
Meets UL94V0

Suggested Fittings
Push-In & Compression

Spatter Guard SRT is made from a 94V0 polyurethane resin that has been specifically formulated to resist against weld spatter without the need of an outer jacket. While this new tubing can be used in any application where you are currently using the jacketed version, it has a higher working pressure making it even better suited for industrial applications. This resin resists oils, greases, heat-aging, ultra-violet light, and is silicone and halogen free. And because it is polyurethane, it is kink resistant, abrasion resistant, and it can also be bonded and formed into retractable coils. Spatter Guard SRT works with push to connect and compression fittings without the need for boots or skiving saving you time and money.

Features

- Protects tube from incidental weld spatter contact.
- No skiving necessary
- Resistant to kink damage.
- Broad range of chemical resistance.
- Can be formed into retractable coils.



Spatter Guard SRT

Part Number & Color Code	Packaging Unit Size	OD	ID	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
					75°F/25°C	150°F/65°C			
1J-376-___	100' Bag	5/32"	.093"	01 05 06 07 11	215 PSI	105 PSI	0.68	9/16"	PI,C
1C-376-___	500' Reel								
1B-376-___	1000' Reel								
1A-376-___	2500' Reel								
1J-371-___	100' Bag	1/4"	.160"	01 05 06 07 11	180 PSI	90 PSI	1.59	1"	PI,C
1B-371-___	250' Reel								
1A-371-___	1000' Reel								
1J-372-___	100' Bag	3/8"	.245"	01 05 06 07 11	170 PSI	85 PSI	3.48	1"	PI,C
1A-372-___	500' Reel								
1J-386-___	50' Bag	1/2"	.320"	01 05 06 07 11	170 PSI	80 PSI	6.37	1-1/8"	PI,C
1A-386-___	200' Reel								

Part Number & Color Code	Packaging Unit Size	OD	ID	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
					75°F/25°C	150°F/65°C			
1J-376-___	100' Bag	4	2.4	01 05 06 07 11	215 PSI	105 PSI	0.68	.562mm	PI,C
1C-376-___	500' Reel								
1B-376-___	1000' Reel								
1A-376-___	2500' Reel								
1J-398-___	100' Bag	6	4	01 05 06 07 11	160 PSI	80 PSI	1.34	25.4mm	PI,C
1B-398-___	250' Reel								
1A-398-___	1000' Reel								
1J-399-___	100' Bag	8	5	01 05 06 07 11	190 PSI	85 PSI	2.61	23.8mm	PI,C
1A-399-___	500' Reel								
1J-390-___	50' Bag	10	6.5	01 05 06 07 11	170 PSI	85 PSI	3.86	25.4mm	PI,C
1A-390-___	500' Reel								
1J-391-___	100' Bag	12	8	01 05 06 07 11	150 PSI	70 PSI	5.34	28.6mm	PI,C
1A-391-___	250' Reel								

Variations Available:

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

Weld Spatter Resistant Tubing

Weld-Spatter Resistant Tubing is made by taking blue Fre-Thane® 95A durometer polyurethane and jacketing it with a specially formulated weld-spatter resistant cover. The result is a jacketed tube that is safe from incidental contact with weld spatter. The outer cover base resin meets UL94V0 requirements and offers strong insulating properties. It also resists oils, greases, acids, bases, aqueous solutions, ozone, heat-aging and ultraviolet light. The cover is approximately .030" thick and does not adhere to the inner tube, allowing the jacket to be easily skived back for fitting connection with conventional compression or push-in fittings.



Weld-Spatter Resistant

Features

- Protects tube from incidental weld spatter contact.
- Flexible with an excellent bend radius.
- Resistant to kink damage.
- Broad range of chemical resistance.
- Can be formed into retractable coils.

Specifications

Temperature Range
-40°F to +165°F

Vacuum Rating
To 28" Hg.

Diameter Tolerances
±.005"

Tube Markings
FW Specs

Working Pressure
3:1 Safety Factor

Resin Compliance
Outer Jacket: UL94V0
Inner Tube: UL94HB

Suggested Fittings
Push-In, Compression,
Barb

Weld-Spatter Resistant

Part Number & Color Code	Packaging Unit Size	OD	ID	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
					75°F/25°C	150°F/65°C			
1J-356-07 _	100' Bag	5/32"	.093"	01 05 07 08	210 PSI	85 PSI	1.58	3/8"	Pl, C B
1B-356-07 _	500' Reel								
1A-356-07 _	1000' Reel								
1J-351-07 _	100' Bag	1/4"	.160"	01 05 06 07 08 11	175 PSI	70 PSI	2.89	1/2"	Pl, C B
1B-351-07 _	250' Reel								
1A-351-07 _	1000' Reel								
1J-352-07 _	100' Bag	3/8"	.245"	01 05 06 07	170 PSI	70 PSI	5.25	7/8"	Pl, C B
1A-352-07 _	500' Reel								
1J-366-07 _	50' Bag	1/2"	.320"	01 07	175 PSI	70 PSI	8.52	1-1/8"	Pl, C B
1A-366-07 _	200' Reel								

Part Number & Color Code	Packaging Unit Size	OD mm	ID mm	Standard Colors	Working Pressure		lbs./100'	Bend Radius	Fitting
					75°F/25°C	150°F/65°C			
1J-358-07 _	100' Bag	6	4	01	160 PSI	65 PSI	2.59	12.7 mm	Pl, C B
1B-358-07 _	250' Reel								
1A-358-07 _	1000' Reel								
1J-359-07 _	100' Bag	8	5	01 07 11	190 PSI	75 PSI	4.15	19 mm	Pl, C B
1A-359-07 _	500' Reel								
1J-360-07 _	100' Bag	10	6.5	01	170 PSI	70 PSI	5.71	22.2 mm	Pl, C B
1A-360-07 _	500' Reel								
1J-361-07 _	50' Bag	12	8	01	155 PSI	60 PSI	7.43	28.6 mm	Pl, C B
1A-361-07 _	250' Reel								

Variations Available:

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

Also known as Spark-Lin®

USA & International: 503-434-5561

US Toll Free: 888-373-9233

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Static Dissipative Polyurethane

Specifications

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:
85A: 4×10^{10} ohms-cm
90A: 9.9×10^9 ohms-cm

Surface Resistivity:
85A: 1×10^{11} ohms/sq
90A: 9.9×10^9 ohms/sq

Working Pressure
3:1 Safety Factor

UV Stabilized
90A & 85A

Resin Compliance
85A: FDA

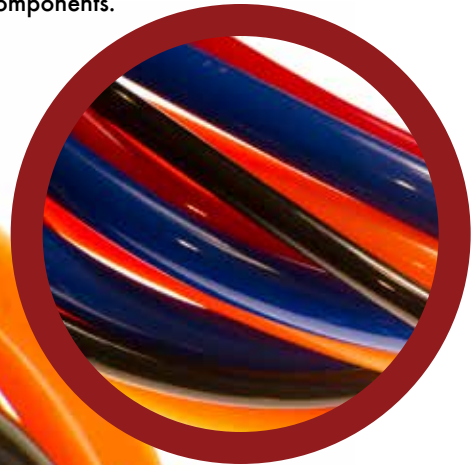
Suggested Fittings
Barb

Static electricity is a stationary charge of electricity resting on an object's surface. With plastic tubing, the charge is usually generated 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, please contact Freelin-Wade.

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.

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.



85A Static Dissipative 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-413- ___ 100' Bag 1C-413- ___ 500' Reel 1B-413- ___ 1000' Reel 1A-413 ___ 2500' Reel		1/8"	1/16"	.031"	01 81	115 PSI	55 PSI	.48	3/16"	B
1J-430- ___ 100' Bag 1C-430- ___ 500' Reel 1B-430- ___ 1000' Reel 1A-430- ___ 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-425- ___ 100' Bag 1B-425- ___ 500' Reel 1A-425- ___ 1000' Reel		1/4"	1/8"	.062"	01 81	120 PSI	60 PSI	1.91	1/2"	B
1J-405- ___ 100' Bag 1A-405- ___ 500' Reel		3/8"	.245"	.065"	01 81	90 PSI	45 PSI	3.29	3/4"	B

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-458- ___ 100' Bag 1B-458- ___ 500' Reel 1A-458- ___ 1000' Reel		6	4	1	81	70 PSI	35 PSI	1.27	9.5 mm	B
1J-472- ___ 100' Bag 1A-472- ___ 500' Reel		9	6	1.5	01 81	80 PSI	40 PSI	2.84	19 mm	B

Variations Available:

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

90A Static Dissipative 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-457-90 _ 100' Bag 1C-457-90 _ 500' Reel 1B-457-90 _ 1000' Reel 1A-457-90 _ 2500' Reel		1/8"	.066"	.030"	01	135 PSI	70 PSI	.44	1/4"	B
1J-486-90 _ 100' Bag 1C-486-90 _ 500' Reel 1B-486-90 _ 1000' Reel 1A-486-90 _ 2500' Reel		5/32"	3/32"	.031"	01 02 05 07 09 81	105 PSI	50 PSI	.61	3/8"	B
1J-451-90 _ 100' Bag 1B-451-90 _ 500' Reel 1A-451-90 _ 1000' Reel		1/4"	.160"	.045"	01 05 07	115 PSI	60 PSI	1.46	3/4"	B
1J-452-90 _ 100' Bag 1A-452-90 _ 500' Reel		3/8"	.245"	.065"	01 05	100 PSI	50 PSI	3.18	1"	B

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-486-90 _ 100' Bag 1A-486-90 _ 2500' Reel		4	2.4	.8	01 02 05 07 09 81	105 PSI	50 PSI	.80	9.5 mm	B
1J-488-90 _ 100' Bag 1B-488-90 _ 500' Reel 1A-488-90 _ 1000' Reel		6	4	1	01 07 09 81	90 PSI	45 PSI	1.3	12.7 mm	B
1J-489-90 _ 100' Bag 1A-489-90 _ 500' Reel		8	5	1.5	01 07	100 PSI	50 PSI	2.6	19 mm	B
1J-490-90 _ 50' Bag 1A-490-90 _ 500' Reel		10	6.5	1.75	01 05 07	100 PSI	50 PSI	3.9	22.3 mm	B
1J-491-90 _ 50' Bag 1A-491-90 _ 250' Reel		12	8	2	01	90 PSI	45 PSI	5.3	28.6 mm	B

Variations Available:

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

Purflex[®], Flexi-Corr[™] & Asepsi-Flex[®]

Specifications

Temperature Range

Purflex -40°F to +165°F

Flexi-Corr

-20°F to +160°F

Asepsi-Flex

-30°F to +150°F

Vacuum Rating

To 28" Hg.

Diameter Tolerances

Purflex ±.005"

Working Pressure

Purflex

4:1 Safety Factor

UV Stabilized

Purflex Yes

Flexi-Corr Yes

Resin Compliance

Purflex NSF61, USPVI,
Meets UL94HB

Flexi-Corr FDA

Suggested Fittings

Purflex Barb

Purflex[™] is a clear, heavy-wall, 85A durometer polyurethane hose reinforced with a tough nylon innerbraid. The reinforcement provides a greater working pressure while maintaining flexibility and kink resistance. The Ether-based compound is ideal for transferring abrasive materials or media that would be damaging to PVC and other hoses.

Features

- Resistant to abrasion, oils, and fungus.
- Tough; withstands constant flexing.
- Light weight.
- Very flexible in subzero temperatures.
- Bondable into multi-ribbon hoses.
- Retains original values; does not harden or crack with age.

Purflex



Flexi-Corr[™]

Flexi-Corr is a lightweight corrugated tubing that is highly flexible. Even at low temperatures, it will bend without kinking. Manufactured from durable Ethyl Vinyl Acetate (EVA), it contains no plasticizers and is resistant to corrosion, aging, ozone and ultraviolet light. The smooth inner-bore makes for a quiet flow. An excellent vacuum and low pressure blower tubing, it's also commonly used as a conduit for bundling assortments of tubing and wiring.



Asepsi-Flex[®]

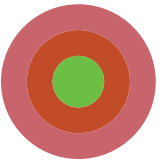
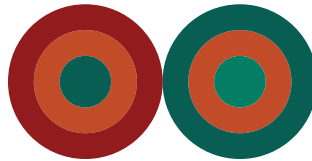
Asepsi-Flex is made from PVC and is smooth inside and out. The unique design resists kinking and is crush-resistant while remaining highly flexible for a variety of vacuum, umbilical, and conduit applications. Available in four colors.

Purflex® Reinforced Polyurethane Hose

Part Number & Color Code	Packaging Unit Size	OD	ID	Wall	Available Only in Clear	Working Pressure		lbs./100'	Bend Radius	Fitting
						75°F/25°C	150°F/65°C			
1A-800-10 1E-800-10	100' Reel Cut Length	.470"	1/4"	.110"		230 PSI	150 PSI	6.0	3/4"	B
1A-801-10 1E-801-10	100' Reel Cut Length	.630"	3/8"	.127"		155 PSI	100 PSI	9.9	1-1/2"	B
1A-802-10 1E-802-10	100' Reel Cut Length	.750"	1/2"	.125"		125 PSI	80 PSI	12.0	2"	B
1A-803-10 1E-803-10	100' Reel Cut Length	.905"	5/8"	.140"		105 PSI	70 PSI	16.4	2-3/4"	B
1A-804-10 1E-804-10	100' Reel Cut Length	1.025"	3/4"	.137"		90 PSI	60 PSI	18.6	3"	B
1A-805-10 1E-805-10	100' Reel Cut Length	1.300"	1"	.150"		75 PSI	50 PSI	26.2	5"	B

Variations Available:

Coiling • Cutting • Bonding • Printing • Packaging • Sizes





Flexi-Corr Cuff

Flexi-Corr™ Corrugated Hose

Part Number & Color Code	Packaging Unit Size	ID	Standard Colors	Working Pressure 75°F/25°C	lbs./100'	Max Vacuum	Part Number for Cuffs
1E-047- ____ 1F-047- ____	25' Length 50' Length	1/2"		15 PSI	6.8	29 Hg	OC-012
1E-053- ____ 1F-053- ____	25' Length 50' Length	5/8"		15 PSI	8.7	29 Hg	OC-058
1E-054- ____ 1F-054- ____	25' Length 50' Length	3/4"		15 PSI	10.0	29 Hg	OC-034
1E-055- ____ 1F-055- ____	25' Length 50' Length	1"		15 PSI	14.0	29 Hg	OC-100
1E-056- ____ 1F-056- ____	25' Length 50' Length	1-1/4"		13 PSI	20.0	29 Hg	OC-114
1E-057- ____ 1F-057- ____	25' Length 50' Length	1-1/2"		9 PSI	26.0	29 Hg	OCH-112
1E-058- ____ 1F-058- ____	25' Length 50' Length	1-3/4"		7 PSI	34.0	28 Hg	N/A
1E-093- ____ 1F-093- ____	25' Length 50' Length	2"		5 PSI	52.0	20 Hg	OC-200

Cutting • Packaging

Asepsi-Flex® PVC Vacuum Hose

Part Number & Color Code	Packaging Unit Size	ID	Standard Colors	Maximum Vacuum
1E-501- ____ 1F-501- ____	25' Length 100' Length	1/2"		29 Hg.
1E-625- ____ 1F-625- ____	25' Length 100' Length	5/8"		29 Hg.

Cutting • Packaging

Flexeel® Polyurethane Reinforced Hose is an excellent alternative to much bulkier rubber hoses. Extremely lightweight and tough, it is ideal for either outdoor or indoor use. Flexeel retains its flexibility even in cold environments.

Flexeel®

Specifications

Temperature Range
-40°F to +165°F

Pressure Rating 70°F
200 P.S.I.

Vacuum Rating
To 28" Hg.

Diameter Tolerances
1/4" - 5/16" ±.005"
3/8" - 1/2" ±.010"

Working Pressure
4:1 Safety Factor

UV Stabilized Yes

Resin Compliance
NSF61, UL94HB

Suggested Fittings
Reusable with Strain Relief

Features

- Withstands constant flexing, even in subzero conditions.
- Kink & abrasion resistant.
- Much lighter than other comparably sized hoses.
- Very small bend radius.
- Resistant to chemicals, water, fuel, oil and fungus.
- Non-marring to furniture and auto finishes.

* In addition to color choice, select fittings for both ends of the coil.



Rigid Fitting with Strain Relief

Flexeel® Polyurethane Straight Hose

Part Number & Color Code	Packaging Unit Size	OD	ID	Standard Colors	Bend Radius	Fitting
PFE4025						None
PFE40254	25'	3/8"	1/4"	T TR TY	7/8"	Reusable Strain Relief 1/4 MPT
PFE40256						Reusable Strain Relief 3/8 MPT
PFE4050						None
PFE40504	50'	3/8"	1/4"	T TR TY	7/8"	Reusable Strain Relief 1/4 MPT
PFE40506						Reusable Strain Relief 3/8 MPT
PFE4100						None
PFE41004	100'	3/8"	1/4"	T TR TY	7/8"	Reusable Strain Relief 1/4 MPT
PFE41006						Reusable Strain Relief 3/8 MPT
PFE4500	500'	3/8"	1/4"	T TR TY	7/8"	None
PFE42000	2000'	3/8"	1/4"	T TR TY	7/8"	None
PFE5025	25'	.473"	5/16"	T TR TY	1 1/4"	None
PFE50254						Reusable Strain Relief 1/4 MPT
PFE5050	50'	.473"	5/16"	T TR TY	1 1/4"	None
PFE50504						Reusable Strain Relief 1/4 MPT
PFE5100	100'	.473"	5/16"	T TR TY	1 1/4"	None
PFE51004						Reusable Strain Relief 1/4 MPT
PFE5250	250'	.473"	5/16"	T TR TY	1 1/4"	None
PFE51500	1500'	.473"	5/16"	T TR TY	1 1/4"	None
PFE6025						None
PFE60254	25'	9/16"	3/8"	T TR TY	1 1/2"	Reusable Strain Relief 1/4 MPT
PFE60256						Reusable Strain Relief 3/8 MPT
PFE6050						None
PFE60504	50'	9/16"	3/8"	T TR TY	1 1/2"	Reusable Strain Relief 1/4 MPT
PFE60506						Reusable Strain Relief 3/8 MPT
PFE6100						None
PFE61004	100'	9/16"	3/8"	T TR TY	1 1/2"	Reusable Strain Relief 1/4 MPT
PFE61006						Reusable Strain Relief 3/8 MPT
PFE6200	200'	9/16"	3/8"	T TR TY	1 1/2"	None
PFE61000	1000'	9/16"	3/8"	T TR TY	1 1/2"	None
PFE8025	25'	.700"	.440"	T	1 5/8"	None
PFE80258						Reusable 1/2 MPT
PFE8050	50'	.700"	.440"	T	1 5/8"	None
PFE80508						Reusable 1/2 MPT
PFE8100	100'	.700"	.440"	T	1 5/8"	None
PFE81008						Reusable 1/2 MPT
PFE8200	200'	.700"	.440"	T	1 5/8"	None
PFE8500	500'	.700"	.440"	T	1 5/8"	None

Variations Available:

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



Available in:

- T** Transparent Blue
- TR** Transparent Red
- TY** Transparent Yellow

Flexeel® Coiled Polyurethane Hose

Reusable Fittings – with Strain Relief										
Part Number, Fitting & Color Code	Fitting Options	Standard Colors	Material Length	Working Length	Retracted Length	OD	ID	Coil OD	Working Pressure	Weight
PUE14-10	__= (2) 1/4" Rigid		10'	8.5'	9"					.41 lbs.
PUE14-15	A= (1) 1/4" Rigid & (1) 1/4" Swivel	T TR TY	15'	12.5'	14.5"	3/8"	1/4"	1 3/4"	200 PSI	.59 lbs.
PUE14-20	B= (2) 1/4" Swivel		20'	17'	19.5"					.74 lbs.
PUE14-25	6= (2) 3/8" Rigid		25'	21'	26.5"					.88 lbs.
PUE516-10	__= (2) 3/8" Rigid		10'	8.5'	9.5"					.68 lbs.
PUE516-15	A= (1) 3/8" Rigid & (1) 3/8" Swivel	T TR TY	15'	12.5'	15.5"	.473"	5/16"	2 3/16"	200 PSI	.89 lbs.
PUE516-20	B= (2) 3/8" Swivel		20'	17'	21"					1.11 lbs.
PUE516-25	6= (2) 3/8" Swivel		25'	21'	26.5"					1.32 lbs.
PUE38-10	4= (2) 1/4" Rigid		10'	8.5'	10.5"					1.00 lbs.
PUE38-15	__= (2) 3/8" Rigid		15'	12.5'	16.7"	9/16"	3/8"	2 7/8"	200 PSI	1.40 lbs.
PUE38-20	A= (1) 3/8" Rigid & (1) 3/8" Swivel	T TR TY	20'	17'	23"					1.85 lbs.
PUE38-25	B= (2) 3/8" Swivel		25'	21'	29"					2.25 lbs.

Reusable Fittings – No Strain Relief										
Part Number, Fitting & Color Code	Fitting Options	Standard Colors	Material Length	Working Length	Retracted Length	OD	ID	Coil OD	Working Pressure	Weight
PRE14-10	__= (2) 1/4" Rigid		10'	8.5'	9"					.41 lbs.
PRE14-15	A= (1) 1/4" Rigid & (1) 1/4" Swivel	T TR TY	15'	12.5'	14.5"	3/8"	1/4"	1 3/4"	200 PSI	.59 lbs.
PRE14-20	B= (2) 1/4" Swivel		20'	17'	19.5"					.74 lbs.
PRE14-25	6= (2) 3/8" Swivel		25'	21'	26.5"					.88 lbs.
PRE516-10	__= (2) 3/8" Rigid		10'	8.5'	9.5"					.68 lbs.
PRE516-15	4= (2) 1/4" Swivel		15'	12.5'	15.5"	.473"	5/16"	2 3/16"	200 PSI	.89 lbs.
PRE516-20	B= (2) 3/8" Swivel	T TR TY	20'	17'	21"					1.11 lbs.
PRE516-25	6= (2) 3/8" Swivel		25'	21'	26.5"					1.32 lbs.
PRE38-10	4= (2) 1/4" Rigid		10'	8.5'	10.5"					1.00 lbs.
PRE38-15	4A= (1) 1/4" Rigid & (1) 1/4" Swivel		15'	12.5'	16.7"	9/16"	3/8"	2 7/8"	200 PSI	1.40 lbs.
PRE38-20	4B= (2) 1/4" Swivel	T TR TY	20'	17'	23"					1.85 lbs.
PRE38-25	__= (2) 3/8" Rigid		25'	21'	29"					2.25 lbs.
	A= (1) 3/8" Rigid & (1) 3/8" Swivel									

Variations Available:

Colors • Cutting • Bonding • Printing • Packaging • Sizes

* In addition to color choice, select fittings for both ends of the coil.

USA & International: 503-434-5561

US Toll Free: 888-373-9233





Flexcoil®

Flexcoil® is the original tangle free coiled hose. It's made from Freelin-Wade's own Fre-Thane® Polyurethane. Just like our other Fre-Thane tubing, it resists abrasion and kinking. Of course it always springs back to its original shape. Flexcoil is ideal for use with air tools, blow guns, impact wrenches and nailers. It's a great way to keep your work area organized and safe. Standard sized coils have two straight "tails" (8" and 16") to position tubing away from tools.

Specifications

Temperature Range
-40°F to +125°F

Vacuum Rating
To 28" Hg.

Diameter Tolerances
±.005"

Hardness
95A

Working Pressure
3:1 Safety Factor

Working Length
80-90% of Material Length

Resin Compliance
95A: NSF61
Meets UL94HB

Variations

Flexcoil variations are easy. If you don't see the color or length that you want, just ask us. We can configure Flexcoil to perfectly match your requirements.

Available in:

- Blue
- Red
- Transparent Blue
- Neon Green
- Yellow



Rigid Fitting with Strain Relief

Swivel Fitting with Strain Relief

Flexcoil® Coiled Polyurethane with Reusable Strain Relief Fittings

Part Number, Fitting & Color Code	Fitting Options	Standard Colors	Material Length	Working Length	Retracted Length	OD	ID	Coil OD	Working Pressure	Weight
PU316-5	— (2) 1/4" Rigid		5'	4'	2"					.23 lbs.
PU316-10	— (2) 1/4" Rigid		10'	8'	6"					.34 lbs.
PU316-15	A= (1) 1/4" Rigid & (1) 1/4" Swivel	B G R Y T	15'	12.5'	10 1/4"	5/16"	3/16"	1 7/8"	160 PSI	.46 lbs.
PU316-20	— (2) 1/4" Swivel		20'	17'	14 1/2"					.56 lbs.
PU316-25	B= (2) 1/4" Swivel		25'	20'	18 1/2"					.68 lbs.
PU14-5	— (2) 1/4" Rigid		5'	4'	2 1/2"					.23 lbs.
PU14-10	— (2) 1/4" Rigid		10'	8'	6"					.41 lbs.
PU14-15	A= (1) 1/4" Rigid & (1) 1/4" Swivel	B G R Y T	15'	12.5'	9 1/2"					.59 lbs.
PU14-20	— (2) 1/4" Swivel		20'	17'	13"	3/8"	1/4"	2 1/2"	130 PSI	.74 lbs.
PU14-25	B= (2) 1/4" Swivel		25'	20'	16"					.88 lbs.
PU14-30	6= (2) 3/8" Rigid		30'	25.5'	19"					1.05 lbs.
PU14-50	— (2) 3/8" Swivel		50'	42.5'	32 1/2"					1.50 lbs.
PU516-10	— (2) 3/8" Rigid		10'	8'	7 1/2"					.68 lbs.
PU516-15	— (2) 3/8" Rigid		15'	12.5'	11 1/2"					.89 lbs.
PU516-20	A= (1) 3/8" Rigid & (1) 3/8" Swivel	B G R Y T	20'	17'	15"	15/32"	5/16"	2 15/16"	130 PSI	1.11 lbs.
PU516-25	— (2) 3/8" Swivel		25'	20'	19"					1.32 lbs.
PU516-30	B= (2) 3/8" Swivel		30'	25.5'	23"					1.52 lbs.
PU38-10	4= (2) 1/4" Rigid		10'	8'	5 1/2"					1.00 lbs.
PU38-15	— (2) 3/8" Rigid		15'	12.5'	8 1/2"					1.40 lbs.
PU38-20	— (2) 3/8" Rigid		20'	17'	11"					1.85 lbs.
PU38-25	A= (1) 3/8" Rigid & (1) 3/8" Swivel	B G R Y T	25'	20'	14"	9/16"	3/8"	4 1/8"	135 PSI	2.25 lbs.
PU38-30	— (2) 3/8" Swivel		30'	25.5'	17"					2.63 lbs.
PU38-50	B= (2) 3/8" Swivel		50'	42.5'	27 1/2"					3.23 lbs.

Variations Available:

Colors • Printing • Packaging

* In addition to color choice, select fittings for both ends of the coil.

See page 34 for Fre-Thane® coils without fittings.

Available in:

- B Blue
- R Red
- T Transparent Blue
- G Neon Green
- Y Yellow

Flexcoil® Coiled Polyurethane with Reusable Fittings

Part Number, Fitting & Color Code	Fitting Options	Standard Colors	Material Length	Working Length	Retracted Length	OD	ID	Coil OD	Working Pressure	Weight
PR532-10 ___			10'	8'	7"					.29 lbs.
PR532-15 ___			15'	12.5'	9 1/2"					.37 lbs.
PR532-20 ___	B= (2) 1/4" Swivel	B G R Y T	20'	17'	12 1/2"	1/4"	.160"	1 1/2"	150 PSI	.46 lbs.
PR532-25 ___			25'	20'	15 1/2"					.54 lbs.
PR532-30 ___			30'	25.5'	19"					.62 lbs.
PR316-5 ___			5'	4'	2"					.23 lbs.
PR316-10 ___			10'	8'	6"					.34 lbs.
PR316-15 ___	B= (2) 1/4" Swivel	B G R Y T	15'	12.5'	10 1/4"	5/16"	3/16"	1 7/8"	160 PSI	.46 lbs.
PR316-20 ___			20'	17'	14 1/2"					.56 lbs.
PR316-25 ___			25'	20'	18 1/2"					.68 lbs.
PR14-5 ___			5'	4'	2 1/2"					.26 lbs.
PR14-10 ___	___= (2) 1/4" Rigid		10'	8'	6"					.41 lbs.
PR14-15 ___	A= (1) 1/4" Rigid	B G R	15'	12.5'	9 1/2"					.59 lbs.
PR14-20 ___	(1) 1/4" Swivel	Y T	20'	17'	13"	3/8"	1/4"	2 1/2"	130 PSI	.74 lbs.
PR14-25 ___	B= (2) 1/4" Swivel		25'	20'	16"					.88 lbs.
PR14-30 ___			30'	25.5'	19"					1.05 lbs.
PR14-50 ___			50'	42.5'	32 1/2"					1.50 lbs.
PR516-10 ___			10'	8'	7 1/2"					.68 lbs.
PR516-15 ___	4B= (2) 1/4" Swivel	B G R	15'	12.5'	11 1/2"					.89 lbs.
PR516-20 ___	B= (2) 3/8" Swivel	Y T	20'	17'	15"	15/32"	5/16"	2 15/16"	130 PSI	1.11 lbs.
PR516-25 ___			25'	20'	19"					1.32 lbs.
PR516-30 ___			30'	25.5'	23"					1.52 lbs.
PR38-10 ___	4= (2) 1/4" Rigid		10'	8'	5 1/2"					1.00 lbs.
PR38-15 ___	4A= (1) 1/4" Rigid		15'	12.5'	8 1/2"					1.40 lbs.
PR38-20 ___	(1) 1/4" Swivel		20'	17'	11"					1.85 lbs.
PR38-25 ___	4B= (2) 1/4" Swivel	B G R Y T	25'	20'	14"	9/16"	3/8"	4 1/8"	135 PSI	2.25 lbs.
PR38-30 ___	___= (2) 3/8" Rigid		30'	25.5'	17"					2.63 lbs.
PR38-50 ___	A= (1) 3/8" Rigid		50'	42.5'	27 1/2"					3.23 lbs.
PR12-10 ___	(1) 3/8" Swivel		10'	8'	7"					2.14 lbs.
PR12-15 ___	B= (2) 3/8" Swivel	B G R	15'	12.5'	11 3/4"					2.95 lbs.
PR12-20 ___		Y T	20'	17'	16 1/2"	3/4"	.467"	4.5"	155 PSI	3.77 lbs.
PR12-25 ___			25'	20'	23"					4.60 lbs.
PR12-30 ___			30'	25.5'	28"					5.35 lbs.
PR12-50 ___			50'	42.5'	40"					7.75 lbs.

Colors • Printing • Packaging

* In addition to color choice, select fittings for both ends of the coil.

Nylon Coiled Hose

Freelin-Wade's Nylon coiled tubing is tough and abrasion resistant. The hoses are fitted with durable brass male swivel compression fittings and spring guards that are preassembled on each hose end. Bulk hoses are offered in 100 foot lengths for users wanting to assemble their own hoses.

Our Nylon Twin Hose (pictured below) has all of the same features but with the added benefit of two hoses bonded together. An intermittent bond allows for easy fitting installation and eliminates taping or tie wrapping hoses together in twin line applications. One line is yellow and the second is a natural translucent color which allows for visual flow verification.

The difference between the Self-Storing Hose and the Mini Coils is that the Self-Storing Hose includes fittings.



Features

- Economical and lightweight.
- Self retracting.
- Resists oil, grease and corrosion.
- Pre-sealed threads on swivel fittings.

Specifications

Temperature Range
-60°F to +180°F

Vacuum Rating
To 28" Hg.

Diameter Tolerances
±.004"

Working Pressure
4:1 Safety Factor

Tube Markings
FW Specifications

Resin Compliance
Meets UL94HB
Testing Requirements



Nylon Self-Storing Hose

Part Number & Color Code	OD	ID	Working Pressure		Material Length	Working Length	Retracted Length	Coil OD	MPT Fitting	Approx. Weight		
			75°F/25°C	150°F/65°C								
N14-12B					12'	9'	5-1/4"		1/4"	.375 lbs.		
N14-25B	.309"	1/4"	185 PSI	110 PSI	25'	19'	10"	3-1/2"	1/4"	.62 lbs.		
N14-50B					50'	37.5'	19-3/4"				1/4"	.937 lbs.
N14-100					100'	75'	39-1/2"					
N38-12B					12'	9'	4-1/2"		3/8"	.687 lbs		
N38-25B	.470"	3/8"	165 PSI	100 PSI	25'	19'	9"	5-5/8"	3/8"	1.62 lbs.		
N38-50B					50'	37.5'	18-1/4"				3/8"	1.75 lbs.
N38-100					100'	75'	36-3/4"					
N12-12B					12'	9'	4-1/4"		1/2"	.375 lbs.		
N12-25B	.625"	1/2"	170 PSI	110 PSI	25'	19'	8-1/2"	9"	1/2"	.562 lbs.		
N12-50B					50'	37.5'	15-1/2"				1/2"	.937 lbs.
N12-100					100'	75'	31-1/2"					

Variation Available:

Packaging

Nylon Mini Coils

Specifications

Temperature Range
-60°F to +180°F

Vacuum Rating
To 28" Hg.

Tube Diameter Tolerances
±.004

Tube Markings
FW Specifications

Freelin-Wade's Nylon Mini Coils have two inch integral pigtailed on each end. This allows for instant push-to-connect or standard compression fittings to be used. These small diameter coils are flexible and easy to handle. They are ideal for small pneumatic tools and robotic applications. Our Mini Coils are made from tough abrasion resistant Nylon.

Variations are easy. If you don't see the color or length that you want, just ask us. We can configure Nylon Mini Coils to perfectly match your requirements.



Nylon Mini Coils

Part Number & Color Code	OD	ID	Standard Colors	Working Pressure		Material Length	Working Length	Retracted Length	Coil OD
				75°F/25°C	150°F/65°C				
N1063-___						4.4'	3-1/2'	3"	
N1066-___	5/32"	.106"	01 03 05 06 07 08 09 10	298 PSI	179 PSI	8.8'	7'	6"	1.312"
N10612-___						17.5'	14'	12"	
N10624-___						35'	28'	24"	
N1706-___						5'	4'	6"	
N1709-___	1/4"	.170"	01 03 05 06 07 08 09 10	280 PSI	170 PSI	6.9'	5-1/2'	9"	1.750"
N17012-___						9.4'	7-1/2'	12"	
N17024-___						19.4'	15-1/2'	25"	
N17036-___						28'	22-1/2'	36"	

Variations Available:

Colors • Printing • Packaging • Sizes

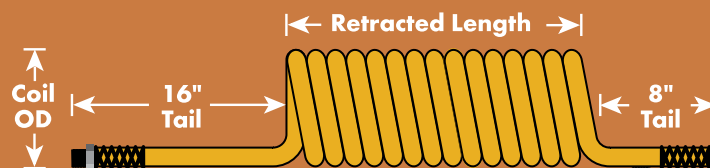
Coil Terminology

Coil Diameter plays a very significant role in retractability. The smaller and tighter the coil diameter, the snappier and more retractable the coil becomes.

Working Length is based on how far a coil can be stretched and used comfortably. Tail length is factored into working length.

Retracted Length is the length of the coiled section of the body of the coil. It does not include the length of tails.

Tails (or Pigtailed) make it easier to use a coil. Our standard tail lengths are 8" and 16". Coils with longer or shorter tails are available.



Fre-Thane® Polyurethane Coils



Fre-Thane® polyurethane coils possess outstanding memory, a soft feel and superior flexibility. These coils are extraordinarily tough and resistant to abrasion, overstretching, kinking and repeated flexing. Freelin-Wade's coils have two straight tails, one that is 8" long and the other that is 16" long.

Variations are easy. If you don't see the color or length that you want, just ask us. We can configure Fre-Thane® Coils to perfectly match your requirements.

Specifications

Temperature Range
-40°F to +125°F

Vacuum Rating
To 28" Hg.

Diameter Tolerances
±.005"

Working Pressure
3:1 Safety Factor

UV Stabilized
95A & 85A

Resin Compliance
See Page 8 for Fre-Thane Compliances

Suggested Fittings
Barb, Push-In (95A)

Fre-Thane® Single Tube Polyurethane Coils

Part Number & Color Code	OD	ID	DUR	Standard Colors	Working Pressure		Material Length	Working Length	Retracted Length	Coil ID
					75°F/25°C	150°F/65°C				
1W-013-__	1/8"	.066"	85A	01 02 04 05 06 07 08 09 10 11 12 14 25 26 27 28 29 32 45 46	115 PSI	45 PSI	10'	8'	8"	3/8"
1W-025-__	1/4"	1/8"	85A	01 04 05 06 07 08 09 10 11 25 26 27 28	125 PSI	50 PSI	10'	8'	5"	3/4"
1W-132-__	1/4"	.159"	90A	01 07 08 10 14 25 27	115 PSI	45 PSI	10'	8'	9.25"	3/4"
1W-005-__	3/8"	.245"	90A	01 05 07 10 11 25 27	105 PSI	40 PSI	10'	8'	7.5"	1-1/4"
1Z-005-__							25'	20'	22"	
1W-151-__	1/4"	.16"	95A	01 04 05 06 07 08 09 10 11 25 26 27 28	150 PSI	60 PSI	10'	8'	7"	1"
1X-151-__	1/4"	.16"	95A				15'	12.5'	9.5"	
1Y-151-__	1/4"	.16"	95A				20'	17'	12.5"	
1Z-151-__	1/4"	.16"	95A				25'	20'	15.5"	
1W-152-__	3/8"	.245"	95A	01 05 06 07 08 10 11 25 27 28 46	130 PSI	60 PSI	10'	8'	6"	1-3/4"
1X-152-__	3/8"	.245"	95A				15'	12.5'	9.5"	
1Y-152-__	3/8"	.245"	95A				20'	17'	13"	
1Z-152-__	3/8"	.245"	95A				25'	20'	16"	

Variations Available:

Colors • Cutting • Bonding • Printing • Packaging • Sizes

Metric Fre-Thane® Single Tube Polyurethane Coils

Part Number & Color Code	OD	ID	DUR	Standard Colors	Working Pressure		Material Length	Working Length	Retracted Length	Coil ID	Tail Length
					75°F/25°C	150°F/65°C					
1W-156-__	4mm	2.4mm	95A	01 02 04 05 06 07 08 09 10 11 12 25 26 27 28 37	165 PSI	85 PSI	3.05 M	2.6 M	133.4mm	19.1mm 16.99/33.9mm	
1X-156-__	4mm	2.4mm	95A				4.57 M	3.8 M	216mm		
1Y-156-__	4mm	2.4mm	95A				6.1 M	5.2 M	292mm		
1Z-156-__	4mm	2.4mm	95A				7.62 M	6.4 M	381mm		
1W-158-__	6mm	4mm	95A	01 04 05 06 07 08 09 10 11 25 26 27 37	135 PSI	65 PSI	3.05 M	2.6 M	139.7mm	25.4mm 16.9/33.9mm	
1X-158-__	6mm	4mm	95A				4.57 M	3.8 M	241.3mm		
1Y-158-__	6mm	4mm	95A				6.1 M	5.2 M	330mm		
1Z-158-__	6mm	4mm	95A				7.62 M	6.4 M	419mm		
1W-159-__	8mm	5mm	95A				01 05 06 07 08 10 11 25 27 37 46	160 PSI	75 PSI		3.05 M
1X-159-__	8mm	5mm	95A	4.57 M	3.8 M	254mm					
1Y-159-__	8mm	5mm	95A	6.1 M	5.2 M	343mm					
1Z-159-__	8mm	5mm	95A	7.62 M	6.4 M	444.5mm					
1W-160-__	10mm	6.5mm	95A	01 05 06 07 08 10 27	135 PSI	70 PSI	3.05 M	2.6 M	139.7mm	44.5mm 16.9/33.9mm	
1X-160-__	10mm	6.5mm	95A				4.57 M	3.8 M	228.6mm		
1Y-160-__	10mm	6.5mm	95A				6.1 M	5.2 M	317.5mm		
1Z-160-__	10mm	6.5mm	95A				7.62 M	6.4 M	406.4mm		

Variations Available:

Colors • Cutting • Bonding • Printing • Packaging • Sizes

Multi-Bore Polyurethane

Specifications

Temperature Range
-40°F to +125°F

Vacuum Rating
To 28" Hg.

Diameter Tolerances
±.005"

Tube Markings
None

Working Pressure
3:1 Safety Factor

UV Stabilized
85A

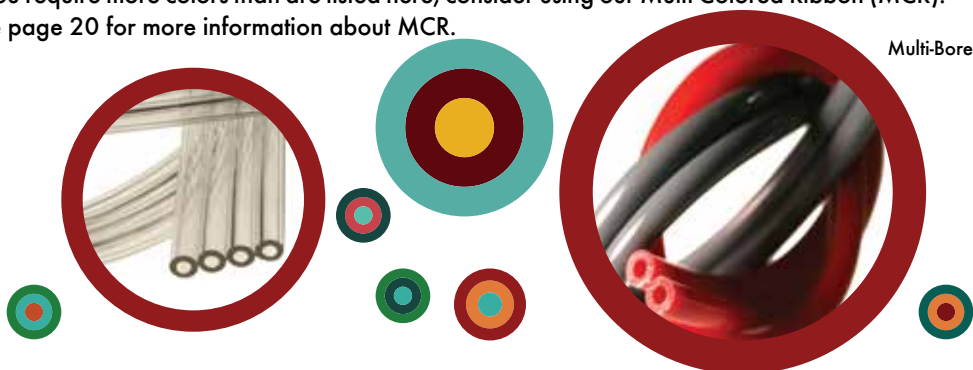
Resin Compliance
See Fre-Thane®
compliances on page 8

Suggested Fittings
Barb

Multi-Bore Polyurethane

Multi-Bore tubing is produced using our Fre-Thane® polyurethane in a single extrusion. Unlike MCR, it is made in one extrusion, which means the tube can only be made in a single color. Unlike MCR, Multi-Bore can't be separated cleanly and should not be used with push-in fittings.

If you require more colors than are listed here, consider using our Multi-Colored Ribbon (MCR). See page 20 for more information about MCR.



85A Multi-Bore Polyurethane

Part Number & Color Code	Packaging Unit Size	OD	ID	Configuration	Standard Colors	Working Pressure		lbs./100'	Fitting
						75°F/25°C	150°F/65°C		
3J-028- ___ 100' Bag 3A-028- ___ 1000' Reel		1/8"	.066"	Triple Tube	10: 14	125 PSI	50 PSI	1.7	B
4J-026- ___ 100' Bag 4A-026- ___ 500' Reel		1/8"	.066"	Quad Tube	10:	125 PSI	50 PSI	2.2	B
2J-016- ___ 100' Bag 2A-016- ___ 500' Reel		1/4"	1/8"	Twin Tube	01 04 05 10: 27	150 PSI	60 PSI	4.1	B
3J-022- ___ 50' Bag 3A-022- ___ 350' Reel		1/4"	1/8"	Triple Tube	01 10:	150 PSI	60 PSI	6.3	B
4J-023- ___ 50' Bag 4A-023- ___ 250' Reel		1/4"	1/8"	Quad Tube	01 10:	150 PSI	60 PSI	8.4	B

90A Multi-Bore Polyurethane

Part Number & Color Code	Packaging Unit Size	OD	ID	Configuration	Standard Colors	Working Pressure		lbs./100'	Fitting
						75°F/25°C	150°F/65°C		
2J-006- ___ 100' Bag 2B-006- ___ 1000' Reel 2A-006- ___ 2000' Reel		1/8"	1/16"	Twin Tube	01 10: 14	190 PSI	75 PSI	1.1	B
2J-013- ___ 100' Bag 2A-013- ___ 500' Reel		1/4"	.159"	Twin Tube	01 14	130 PSI	50 PSI	2.9	B
2J-024- ___ 50' Bag 2A-024- ___ 250' Reel		3/8"	1/4"	Twin Tube	01 10:	120 PSI	50 PSI	6.8	B

Variations Available:

Coiling • Cutting • Bonding • Printing • Packaging • Sizes

Fre-Thane® Multi-Bore Polyurethane Coils

Part Number & Color Code	OD	ID	Bore/DUR	Standard Colors	Working Pressure		Material Length	Working Length	Retracted Length	Coil ID
					75°F/25°C	150°F/65°C				
2V-006- ___	1/8"	1/16"	Twin 90A	01 10: 14	160 PSI	65 PSI	7'	5'	6"	3/4"
2W-016- ___	1/4"	1/8"	Twin 85A	01 04 05 10: 27	130 PSI	50 PSI	10'	8'	12.5"	1"
3W-022- ___	1/4"	1/8"	Triple 85A	01	130 PSI	50 PSI	10'	8'	16"	1-1/4"
4W-023- ___	1/4"	1/8"	Quad 85A	01 10:	130 PSI	50 PSI	10'	7'	21"	1-1/4"

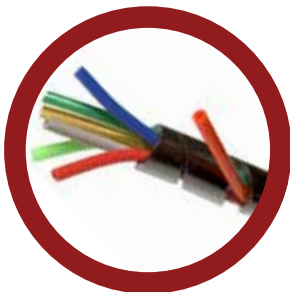
Variations Available:

Cutting • Printing • Packaging

Jacketing & Accessories



Jacketing your tubing lines is an attractive and easy way to organize your tubing. It saves time over tie wrapping and creates a more user friendly assembly.



PVC Jacketed Bundles

Freelin-Wade's PVC Jacketed Bundles are an excellent way to color code a pneumatic system in a neat flexible package. Ten colors of Fre-Thane® 85A Polyurethane tubing, jacketed with a clear flexible PVC. Variations include bundling wire, different tube sizes, materials, colors and coiling.

Hose Cutter Part Number	Packaging Unit Size	OD	ID	Bundled Colors	lbs./100'	Fitting
10J-013-00	50' Bag	1/8"	.066"	02 04 05 06 07 08 09 10 11 12	7.0	B
10A-013-00	200' Reel					
10A-025-00	100' Bag	1/4"	1/8"	01 04 05 06 07 08 09 10 11 12	21.0	B
10E-025-00	Cut Length					

Variations Available:

Bundle your own choice of tubing and wire.

Expandable Webbing

Expandable Webbing can expand up to three times its size. The webbing is a polyester sleeve that allows heat and humidity to escape. Expandable Webbing is flexible and easy to install. Available only in black.

Part Number	Packaging Unit Size	Minimum Size	lbs./100'
1J-126-01	25' Bag	1/4"	.2
1D-126-01	100' Box		
1B-126-01	500' Reel		
1J-127-01	25' Bag	1/2"	.8
1D-127-01	100' Box		
1B-127-01	500' Reel		
1J-128-01	25' Bag	3/4"	1.2
1D-128-01	100' Box		
1B-128-01	500' Reel		

Spiral Wrap

Spiral Wrap is made from a spiral cut of linear low density polyethylene (LLDPE) material. It easily wraps around tubing and allows for easy branching of contents.

Part Number	Packaging Unit Size	OD	ID	Standard Colors	lbs./100'
1J-078-___	25' Bag	1/2"	3/8"	01 10	3.4
1D-078-___	100' Box				
1A-078-___	250' Reel				

Tubing Cutters & Replacement Blades

Suitable for 1/8" - 3/4" O.D. tubing. Keep one everywhere that you have tubing.

Tubing Cutter Part Number	Description
PXC058	Black Tubing Cutter
PXC058B	Blue Tubing Cutter
PXC058-L	Black Tubing Cutter w/Red Leash

Replacement Blades Part Number	Description
PXC059	Single Blade
PXC059-P5	5-Pack
PXC059-P10	10-Pack

Jacketing & Accessories

Hose Cutter

Our heavy duty Hose Cutter will cut plastic tubing or hose up to 1" O.D. Reinforced hose can be cut perfectly with ease.

Hose Cutter Part Number	Description
PXC098R	Red Hose Cutter
PXC099M	Single Replacement Blade



Tubing Marker Clips

These easy-snap clips will not damage tubing. The kit consists of 50 each numerals 0 through 9 and 50 each of 14 different letters: A, B, C, D, E, F, G, H, J, P, R, X, Y, Z. Comes in a convenient plastic storage case.

Marker Clip Part Number	Fits Tubing Size
TMC-02	1/8"
TMC-04	1/4"

Marker Clip Part Number	Fits Tubing Size
TMC-05	5/32"
TMC-06	3/8"



Tubing H Clips

Our "H" Clips are an easy and inexpensive way to route dual tubing or hose runs. Conveniently attached via the countersunk center screw hole (3/16"). Tubing "H" Clips neatly and safely secure tubing for a clean professional look. Manufactured from black Polyacetal plastic with a useful temperature range of -40° to + 212°F.

"H" Clip Part Number	Fits Tubing Size
HTC-156-200	.156" - .200"
HTC-201-325	.201" - .325"
HTC-326-400	.326" - .400"
HTC-401-485	.401" - .485"

"H" Clip Part Number	Fits Tubing Size
HTC-486-575	.486" - .575"
HTC-576-675	.576" - .675"
HTC-676-825	.676" - .825"
HTC-826-1000	.826" - 1.00"

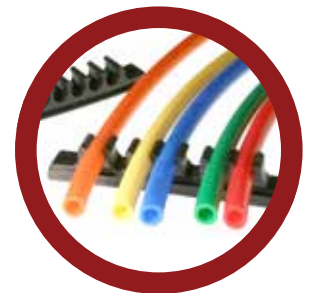


Tube Channels

Our tube channel mounts are perfect for securing multiple tubing lines. The small 10-tube channel can be mounted with its pressure sensitive adhesive backing or with a #4 screw. Available in three sizes to fit 5/32", 3/16" and 1/4" tubing. The large style channel holds 3/8" and 1/2" tubing and mounts with two screws.

Large Channel Part Number	Tubing Size OD	Number of Channels
PTC6-7	3/8	7
PTC6-10	3/8	10
PTC8-6	1/2	6

Small Channel Part Number	Tubing Size OD	Number of Channels
TC5-10	5/32	10
TC3-10	3/16	10
TC4-10	1/4	10



Resource Guide—Chemical Resistance Chart

This information was provided to Freelin-Wade by our suppliers and other sources. It is to be used only as a general reference guide to aid in the selection of products in which chemical and material compatibility issues are a factor. This guide is not intended as a complete nor conclusive database. Freelin-Wade does not guarantee these ratings since the resistance of a material can be greatly affected by the temperature, consistency, and presence of other chemicals. Ultimately, the consumer must determine the chemical compatibility of an item based on the conditions in which the product is being used.

Rating Scale

- 1= Little or no impact
- 2= Minor effect
- 3= Moderate effect
- 4= Severe effect

	PUR	PE	PVC	Nylon	Kynar
Acetic Acid, Glacial	4	2	4	-	1
Acetic Acid, 30%	4	1	4	2	1
Acetone	4	2	4	1	4
Acetylene	1	4	1	1	1
Alkazene	4	-	-	-	-
Aluminum Chloride (aq)	3	2	1	-	1
Aluminum Nitrate (aq)	3	-	2	-	1
Ammonia Anhydrous	4	2	1	-	4
Ammonia Gas (cold)	3	-	3	1	4
Ammonia Gas (hot)	4	-	-	1	4
Ammonium Chloride (aq) 40%	2	1	1	-	1
Ammonium Sulfate (aq)	1	1	1	1	1
Amyl Alcohol	4	2	1	-	1
Amyl Naphthalene	4	-	-	-	-
Animal Fats	1	2	-	-	-
Aqua Regia	4	2	3	-	-
Arsenic Acid	3	2	1	-	1
Asphalt	2	1	1	-	1
ASTM Fuel A	2	-	-	-	-
ASTM Fuel B	3	-	-	-	-
ASTM Fuel C	3	1	4	-	-
Barium Chloride (aq)	1	2	1	1	1
Beer	2	2	1	1	1
Beet Sugar Liquors	4	1	1	-	1
Benzene	3	4	3	1	1
Benzine	2	-	-	-	-
Blast Furnace Gas	4	-	-	-	-
Bleach Solutions	4	1	1	-	1
Borax	1	1	1	-	1
Boric Acid	1	1	1	-	1
Brake Fluid	4	-	-	-	1
Brine	2	-	3	-	1
Bromine Water	4	-	3	4	1
Bunker Oil	2	-	-	-	-
Butane	1	3	3	1	1
Butter	1	-	-	-	-
Butyl Alcohol (Butanol)	3	1	3	1	1
Butylene	4	1	1	-	1
Calcium Chloride (aq)	1	1	3	1	1
Calcium Hydroxide (aq)	2	1	2	-	1
Calcium Nitrate (aq)	1	-	1	1	1
Calcium Sulfide (aq)	1	-	-	-	-
Cane Sugar Liquors	4	-	1	-	1
Carbolic Acid	3	4	3	-	-
Carbon Dioxide	1	2	1	-	1
Carbonic Acid	4	2	1	-	1
Carbon Monoxide	1	2	1	-	1
Carbon Tetrachloride	4	4	4	3	1
Castor Oil	1	1	1	-	1
Chlorine (dry)	4	3	4	4	1
Chlorine (wet)	4	3	-	4	1
Chloroform	4	4	4	3	1
Chlorox	4	-	-	-	-
Chromic Acid 50%	4	1	4	4	1
Citric Acid	1	1	2	1	1
Coal Tar (Creosote)	3	-	-	-	-
Coconut Oil	2	1	1	-	1
Cod Liver Oil	1	1	1	-	-
Coke Oven Gas	4	-	-	-	-
Copper Chloride (aq)	1	2	1	-	1
Copper Cyanide (aq)	1	2	1	-	1
Corn Oil	1	1	2	-	1
Cotton Seed Oil	1	1	2	-	1
Cresol (Methyl Phenol)	4	4	4	4	1
Cyclohexane	1	4	4	1	1
Denatured Alcohol	4	-	-	-	-
Detergent Solution	3	1	1	-	-
Diesel Oil	2	3	1	-	-
Dioxane	4	3	-	-	4
Dowtherm Oil	3	-	-	-	-
Dry Cleaning Fluids	4	-	-	-	-
Ethane	1	-	1	-	-
Ethyl Acrylate	4	-	-	-	1
Ethyl Alcohol (Ethanol)	4	2	3	3	1
Ethyl Benzene	4	-	-	-	-
Ethyl Cellulose	2	-	-	-	-
Ethyl Chloride	4	4	4	-	1
Ethyl Ether	3	4	4	-	1
Ethylene Chloride	4	4	4	-	-
Ethylene Glycol ² (Anti-Freeze)	2	1	1	1	1
Ethylene Oxide	4	3	3	1	1
Ethylene Trichloride	4	4	-	-	-
Ferric Chloride (aq)	1	2	1	-	1
Ferric Nitrate (aq)	1	2	1	-	1
Ferric Sulfate (aq)	2	1	1	-	1
Fluorine (Liquid)	4	3	4	4	1
Formaldehyde (RT)	4	2	1	1	1
Formic Acid	4	2	1	4	1
Freon 11	4	3	1	-	-
Freon 12	1	1	1	1	-
Freon 22	4	-	1	1	-
Fuel Oil (Bunker 'C')	2	3	1	-	1
Gasoline (100 Octane, High Test)	3	4	3	1	1
Glue	1	1	3	-	1
Glycerin (Glycerol)	1	1	1	1	1
Glycols	4	-	-	1	-
Green Sulfate Liquor	1	-	-	-	-
Hexane	2	4 ¹	2 ²	-	1
Hydraulic Oil	1	1-3	1	-	-
Hydrochloric Acid (cold) 37%	4	2	2	4	1
Hydrochloric Acid (hot) 37%	4	-	-	4	1
Hydrofluoric Acid (Conc.) (cold)	4	2	-	-	1
Hydrofluoric Acid (Conc.) (hot)	4	-	-	-	1
Hydrogen Gas	1	1	1	1	1
Isobutyl Alcohol	3	1	-	-	1
Isooctane	2	3	1	-	1
Isopropyl Acetate	4	3	4	-	-
Isopropyl Alcohol (Isopropanol)	3	1	-	1	1
Isopropyl Ether	2	1	2	-	1
Kerosene	1	4	2	1	1

	PUR	PE	PVC	Nylon	Kynar
Lacquers	4	1	4	-	-
Lacquer Solvents	4	1	3	-	-
Lard	1	1	1	-	1
Lavender Oil	4	-	-	-	-
Lead Acetate (aq)	4	1	1	-	1
Linseed Oil	2	3	1	1	1
Lubricated Petroleum Gas	1	-	-	1	-
Lubricating Oils	1-2 ³	4	2	1	1
Lye	4	1-4 ⁴	1-2	-	-
Magnesium Chloride (aq)	1	2	1	1	1
Magnesium Hydroxide (aq)	4	2	1	-	1
Mercury	1	1	1	1	1
Methane	3	-	2	1	1
Methyl Acetate	4	2	4	1	1
Methyl Acrylate	4	-	-	-	1
Methyl Alcohol (Methanol)	4	1	1	1	1
Methyl Butyl Ketone	4	-	1	-	-
Methyl Chloride	4	4	4	1	1
Methylene Chloride	4	4	4	-	1
Methyl Ethyl Ketone	4	2	4	1	4
Methyl Isobutyl Ketone	4	3	4	1	4
Milk	4	1	1	1	1
Mineral Oil	1	3	1	1	1
Motor Oil 20W, 10W40	2	3	2	1	1
Naphtha (Lighter Fluid)	2	4	1	1	1
Naphthalene (Moth Repellent)	2	2	4	1	1
Natural Gas	2	-	1	-	1
Neatsfoot Oil	1	-	-	-	-
Nitric Acid 70%	4	2	-	4	1
Nitric Acid (Dilute) 10%	3	2	1	4	1
Nitroethane	4	-	-	-	1
N-Octane	4	1	-	-	1
Oleic Acid	2	1	3	1	1
Oleum Spirits	3	4	4	-	4
Olive Oil	1	1	-	-	1
Oxygen (cold)	1	-	-	1	1
Oxygen (200-400F)	4	-	-	-	-
Paint Thinner, Duco	4	-	-	-	-
Perchloric Acid	4	1	3	-	-
Perchloroethylene	4	4	3	3	1
Petroleum - Below 250F	2	3	-	-	1
Petroleum - Above 250F	4	-	-	4	-
Phenol (Carbolic Acid)	3	2	3-4	4	1
Phenyl Ethyl Ether	4	-	-	-	-
Phosphoric Acid - 45%	4	1	2	2	1
Pickling Solution	4	-	-	-	-
Picric Acid	2	1	4	3	1
Potassium Acetate (aq)	4	-	-	-	1
Potassium Chloride (aq)	1	2	1	-	1
Potassium Cyanide (aq)	1	2	1	-	1
Potassium Hydroxide (aq)	4	1	1	3	4
Producer Gas	1	1	1	-	-
Propane	1	4	1	1	1
Propyl Alcohol (Propanol)	4	1	1	-	1
Propylene	4	-	2	-	-
Propylene Glycol (Anti-Freeze)	3	1	3	2	1
Propylene Oxide	4	2	-	-	4
Pydraul, 10E, 29 ELT	4	-	-	-	-
Pydraul 30E, 50E, 65E	4	-	-	-	-
Pydraul, 115E	4	-	-	-	-
Pydraul 230E, 312C, 540C	4	-	-	-	-
Repeeseed Oil	2	4	-	-	-
RJ-1 (MIL-F-23338 B)	1	-	-	-	-
RP-1 (MIL-F-25576 C)	1	-	-	-	-
Salt Water	2	1	1	1	1
Sewage	1	-	-	-	1
Silicate Esters	1	-	-	-	1
Silicone Oils	1	1	1	-	1
Silver Nitrate	1	1	1	-	1
Skydrol 500	4	-	-	-	-
Skydrol 700	4	-	-	-	-
Soap Solutions	3	4	1	1	-
Sodium Chloride (aq)	1	1	1	1	-
Sodium Hydroxide (aq)	4	1	1	2	4
Sodium Peroxide (aq)	4	1	2	-	1
Sodium Phosphate (aq)	1	-	-	-	1
Sodium Sulfate (aq)	1	1	1	-	1
Soy Bean Oil	2	1	1	-	1
Stoddard Solvent	1	3	3	-	-
Styrene (Monomer)	4	-	4	1	1
Sucrose Solution	4	2	-	-	-
Sulfuric Acid (Dilute Battery Acid)	3	1	1	-	1
Sulfuric Acid (Conc)	4	2	4	-	1
Sulfuric Acid (20% Oleum)	4	-	4	-	4
Sulfurous Acid	4	2	1	-	-
Tannic Acid	4	1	1	-	1
Tetrachloroethylene	4	2	4	-	-
Toluene (Toluol)	4	3	4	1	1
Transformer Oil	2	-	2	-	-
Transmission Fluid Type A	2	-	-	-	-
Trichloroethane	4	4	3	3	1
Trichloroethylene	4	4	4	3	1
Turbine Oil	1	3	1	1	-
Turpentine	4	4	4	1	1
Varnish	3	3	4	-	1
Vinegar	2	1	1	1	1
Vinyl Chloride	4	4	4	-	1
Water	1	1	1	1	1
Whiskey, Wines	2	1	1	1	1
White Oil	1	-	-	-	-
Wood Oil	3	-	-	-	-
Xylene	4	4	4	1	1
Zinc Acetate (aq)	4	-	-	-	1
Zinc Chloride (aq)	2	1	1	1	1

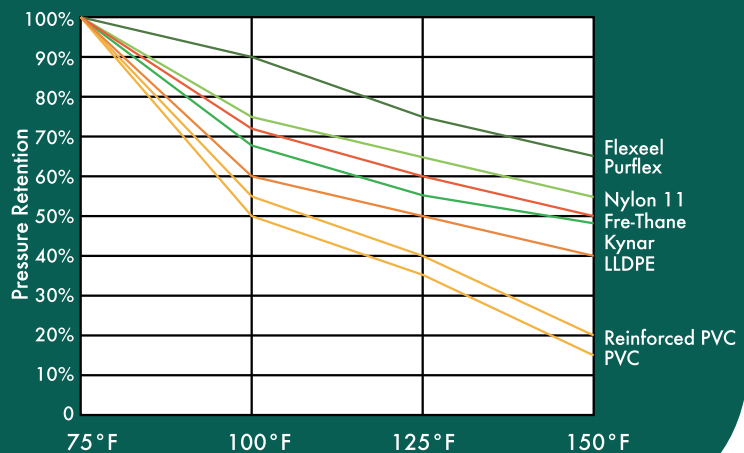
- 1 Petroleum Base 2 Synthetic Base = 1, Petroleum Base = 3
- 3 SAE 10, 20, 30, 40, 50 = 1, Petroleum = 2
- 4 Calcium Hydroxide & Potassium (Hydroxide=1, Sodium Hydroxide=4) 5 See Propylene Glycol 6 See Ethylene Glycol

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Working Pressure at Elevated Temperatures

To be used for reference only





1730 NE Miller Street
McMinnville, Oregon 97128
United States of America
888-373-9233
www.freelin-wade.com