



# Nylon Pneumatic Tubing



NITRA nylon 12 tubing is made from the highest quality, 100% virgin raw materials and has a hardness specification of Shore D 70. Nylon tubing is recognized as an industry standard for applications which require higher working pressures and better heat/chemical resistance than polyurethane. NITRA nylon 12 tubing is strong, lightweight, and has a very low moisture absorption rate so it will remain flexible with a longer life than other nylons. NITRA nylon 12 is ideal for use with NITRA push-to-connect fittings.

## Features

- Inch and metric sizes available
- Five colors - black, blue, natural, red and yellow
- 100 foot and 500 foot package sizes
- Shore D 70 hardness
- High working pressure and temperature/chemical resistance
- Made in USA

### Nylon 5/32 in. (4 mm) Tubing Specifications

<b>Outside Diameter (in.)</b>	0.156	<b>Working Pressure (psi) @ 70°F</b>	350	<b>Temp. Range</b>	-60°F to +200°F (-51°C to +93°C)		
<b>Inside Diameter (in.)</b>	0.106	<b>Burst Pressure (psi)</b>	1050	<b>Hardness</b>	Shore D 70		
<b>Wall Thickness (in.)</b>	0.025	<b>Vacuum Rating</b>	To 28" Hg	<b>Bend Radius (in.)</b>	0.50		
<b>100 ft. Package Length</b>				<b>500 ft. Reel Length</b>			
<b>Part Number</b>	<b>Price</b>	<b>Color</b>	<b>PKG WT (lbs)</b>	<b>Part Number</b>	<b>Price</b>	<b>Color</b>	<b>Package Weight (lbs)</b>
N532BLK100	\$11.00	Black	1.0	N532BLK500	\$54.00	Black	3.0
N532BLU100	\$11.00	Blue		N532BLU500	\$54.00	Blue	
N532NAT100	\$11.00	Natural		N532NAT500	\$54.00	Natural	
N532RED100	\$11.00	Red		N532RED500	\$54.00	Red	
N532YEL100	\$11.00	Yellow		N532YEL500	\$54.00	Yellow	

### Nylon 1/4 in. Tubing Specifications

<b>Outside Diameter (in.)</b>	0.250	<b>Working Pressure (psi) @ 70°F</b>	290	<b>Temp. Range</b>	-60°F to +200°F (-51°C to +93°C)		
<b>Inside Diameter (in.)</b>	0.180	<b>Burst Pressure (psi)</b>	870	<b>Hardness</b>	Shore D 70		
<b>Wall Thickness (in.)</b>	0.035	<b>Vacuum Rating</b>	To 28" Hg	<b>Bend Radius (in.)</b>	1.25		
<b>100 ft. Package Length</b>				<b>500 ft. Reel Length</b>			
<b>Part Number</b>	<b>Price</b>	<b>Color</b>	<b>PKG WT (lbs)</b>	<b>Part Number</b>	<b>Price</b>	<b>Color</b>	<b>Package Weight (lbs)</b>
N14BLK100	\$18.00	Black	2.0	N14BLK500	\$91.00	Black	7.0
N14BLU100	\$18.00	Blue		N14BLU500	\$91.00	Blue	
N14NAT100	\$17.50	Natural		N14NAT500	\$91.00	Natural	
N14RED100	\$18.00	Red		N14RED500	\$91.00	Red	
N14YEL100	\$18.00	Yellow		N14YEL500	\$91.00	Yellow	

### Nylon 3/8 in. Tubing Specifications

<b>Outside Diameter (in.)</b>	0.375	<b>Working Pressure (psi) @ 70°F</b>	250	<b>Temp. Range</b>	-60°F to +200°F (-51°C to +93°C)		
<b>Inside Diameter (in.)</b>	0.275	<b>Burst Pressure (psi)</b>	750	<b>Hardness</b>	Shore D 70		
<b>Wall Thickness (in.)</b>	0.050	<b>Vacuum Rating</b>	To 28" Hg	<b>Bend Radius (in.)</b>	2.00		
<b>100 ft. Package Length</b>				<b>500 ft. Reel Length</b>			
<b>Part Number</b>	<b>Price</b>	<b>Color</b>	<b>PKG WT (lbs)</b>	<b>Part Number</b>	<b>Price</b>	<b>Color</b>	<b>Package Weight (lbs)</b>
N38BLK100	\$39.00	Black	3.0	N38BLK500	\$195.00	Black	12.0
N38BLU100	\$39.00	Blue		N38BLU500	\$195.00	Blue	
N38NAT100	\$39.00	Natural		N38NAT500	\$195.00	Natural	
N38RED100	\$39.00	Red		N38RED500	\$195.00	Red	
N38YEL100	\$39.00	Yellow		N38YEL500	\$195.00	Yellow	



# Nylon Pneumatic Tubing

Nylon 1/2 in. Tubing Specifications							
<b>Outside Diameter (in.)</b>	0.500	<b>Working Pressure (psi) @ 70°F</b>		240	<b>Temp. Range</b>	-60°F to +200°F (-51°C to +93°C)	
<b>Inside Diameter (in.)</b>	0.375	<b>Burst Pressure (psi)</b>		720	<b>Hardness</b>	Shore D 70	
<b>Wall Thickness (in.)</b>	0.062	<b>Vacuum Rating</b>		To 28" Hg	<b>Bend Radius (in.)</b>	3.50	
100 ft. Package Length				500 ft. Reel Length			
Part Number	Price	Color	PKG WT (lbs)	Part Number	Price	Color	Package Weight (lbs)
N12BLK100	\$66.00	Black	4.0	N12BLK500	\$330.00	Black	19.0
N12BLU100	\$66.00	Blue		N12BLU500	\$330.00	Blue	
N12NAT100	\$66.00	Natural		N12NAT500	\$330.00	Natural	
N12RED100	\$66.00	Red		N12RED500	\$330.00	Red	
N12YEL100	\$66.00	Yellow		N12YEL500	\$330.00	Yellow	

Nylon 6 mm Tubing Specifications							
<b>Outside Diameter (mm)</b>	6.0	<b>Working Pressure (psi) @ 70°F</b>		340	<b>Temp. Range</b>	-60°F to +200°F (-51°C to +93°C)	
<b>Inside Diameter (mm)</b>	4.0	<b>Burst Pressure (psi)</b>		1020	<b>Hardness</b>	Shore D 70	
<b>Wall Thickness (mm)</b>	1.0	<b>Vacuum Rating</b>		To 28" Hg	<b>Bend Radius (mm)</b>	32.0	
100 ft. Package Length				500 ft. Reel Length			
Part Number	Price	Color	PKG WT (lbs)	Part Number	Price	Color	Package Weight (lbs)
N6MBLK100	\$18.00	Black	1.0	N6MBLK500	\$90.00	Black	6.0
N6MBLU100	\$18.00	Blue		N6MBLU500	\$90.00	Blue	
N6MNAT100	\$18.00	Natural		N6MNAT500	\$90.00	Natural	
N6MRED100	\$18.00	Red		N6MRED500	\$90.00	Red	
N6MYEL100	\$18.00	Yellow		N6MYEL500	\$90.00	Yellow	

Nylon 8 mm Tubing Specifications							
<b>Outside Diameter (mm)</b>	8.0	<b>Working Pressure (psi) @ 70°F</b>		250	<b>Temp. Range</b>	-60°F to +200°F (-51°C to +93°C)	
<b>Inside Diameter (mm)</b>	6.0	<b>Burst Pressure (psi)</b>		750	<b>Hardness</b>	Shore D 70	
<b>Wall Thickness (mm)</b>	1.0	<b>Vacuum Rating</b>		To 28" Hg	<b>Bend Radius (mm)</b>	38.0	
100 ft. Package Length				500 ft. Reel Length			
Part Number	Price	Color	PKG WT (lbs)	Part Number	Price	Color	Package Weight (lbs)
N8MBLK100	\$28.50	Black	2.0	N8MBLK500	\$143.00	Black	9.0
N8MBLU100	\$28.50	Blue		N8MBLU500	\$143.00	Blue	
N8MNAT100	\$28.50	Natural		N8MNAT500	\$143.00	Natural	
N8MRED100	\$28.50	Red		N8MRED500	\$143.00	Red	
N8MYEL100	\$28.50	Yellow		N8MYEL500	\$143.00	Yellow	

Nylon 10 mm Tubing Specifications							
<b>Outside Diameter (mm)</b>	10.0	<b>Working Pressure (psi) @ 70°F</b>		225	<b>Temp. Range</b>	-60°F to +200°F (-51°C to +93°C)	
<b>Inside Diameter (mm)</b>	8.0	<b>Burst Pressure (psi)</b>		675	<b>Hardness</b>	Shore D 70	
<b>Wall Thickness (mm)</b>	1.0	<b>Vacuum Rating</b>		To 28" Hg	<b>Bend Radius (mm)</b>	51.0	
100 ft. Package Length				500 ft. Reel Length			
Part Number	Price	Color	PKG WT (lbs)	Part Number	Price	Color	Package Weight (lbs)
N10MBLK100	\$40.00	Black	2.0	N10MBLK500	\$200.00	Black	11.0
N10MBLU100	\$40.00	Blue		N10MBLU500	\$200.00	Blue	
N10MNAT100	\$40.00	Natural		N10MNAT500	\$200.00	Natural	
N10MRED100	\$40.00	Red		N10MRED500	\$200.00	Red	
N10MYEL100	\$40.00	Yellow		N10MYEL500	\$200.00	Yellow	



# Nylon Pneumatic Tubing

Nylon 12 mm Tubing Specifications							
<b>Outside Diameter (mm)</b>	12.0	<b>Working Pressure (psi) @ 70°F</b>		200	<b>Temp. Range</b>		-60°F to +200°F (-51°C to +93°C)
<b>Inside Diameter (mm)</b>	10.0	<b>Burst Pressure (psi)</b>		600	<b>Hardness</b>		Shore D 70
<b>Wall Thickness (mm)</b>	1.0	<b>Vacuum Rating</b>		To 28" Hg	<b>Bend Radius (mm)</b>		63.5
100 ft. Package Length				500 ft. Reel Length			
Part Number	Price	Color	PKG WT (lbs)	Part Number	Price	Color	Package Weight (lbs)
<b>N12MBLK100</b>	\$64.00	Black	4.0	<b>N12MBLK500</b>	\$321.00	Black	19.0
<b>N12MBLU100</b>	\$64.00	Blue		<b>N12MBLU500</b>	\$321.00	Blue	
<b>N12MNAT100</b>	\$64.00	Natural		<b>N12MNAT500</b>	\$321.00	Natural	
<b>N12MRED100</b>	\$64.00	Red		<b>N12MRED500</b>	\$321.00	Red	
<b>N12MYEL100</b>	\$64.00	Yellow		<b>N12MYEL500</b>	\$321.00	Yellow	

## NITRA Pneumatic Tubing Accessories

Pneumatic Tubing Cutter				
Part Number	Description	Pcs/Pkg	Package Weight (lbs)	Price
<b>TC-12</b>	NITRA pneumatic tubing cutter for use with 1/8 to 1/2 inch and 4 to 12 mm outside diameter flexible plastic tubing.	1	0.1	\$4.00
<b>TC-20</b>	NITRA pneumatic heavy duty tubing cutter for use with polyurethane, nylon and other flexible tubing up to 2 inch [50mm] outside diameter.	1	0.2	\$7.75



TC-12



TC-20



# Tubing Working Pressure Ratings

<b>Nylon Tubing Working Pressure Ratings (psi)</b>				
<b>Size O.D.</b>	<b>70°F (21°C)</b>	<b>100°F (37.8°C)</b>	<b>125°F (51.7°C)</b>	<b>150°F (65.6°C)</b>
<b>1/8"</b>	420	168	133	125
<b>5/32" (4 mm)</b>	350	200	169	160
<b>1/4"</b>	290	183	160	140
<b>5/16" (8 mm)</b>	250	183	156	135
<b>3/8"</b>	250	165	148	128
<b>1/2"</b>	240	145	133	125
<b>6 mm</b>	340	190	160	140
<b>10 mm</b>	225	150	130	115
<b>12 mm</b>	200	140	130	120
<b>14 mm</b>	175	100	85	70

<b>Polyurethane Tubing Working Pressure Ratings (psi)</b>		
<b>Size O.D.</b>	<b>75°F (23.9°C)</b>	<b>150°F (65.6°C)</b>
<b>1/8" (0.125)</b>	240	100
<b>5/32" (0.156)</b>	200	85
<b>3/16" (0.187)</b>	150	90
<b>1/4" (0.250)</b>	180	70
<b>5/16" (0.3125)</b>	175	75
<b>3/8" (0.375)</b>	150	70
<b>1/2" (0.500)</b>	150	70
<b>9/16" (0.5625)</b>	140	60
<b>5/8" (0.625)</b>	150	70
<b>3/4" (0.750)</b>	140	70
<b>4 mm</b>	200	85
<b>6 mm</b>	180	65
<b>8 mm</b>	175	75
<b>10 mm</b>	150	70
<b>12 mm</b>	150	60
<b>16 mm</b>	150	70



# Pneumatic Fitting Instructions and Caution Information

## Assembly Instructions

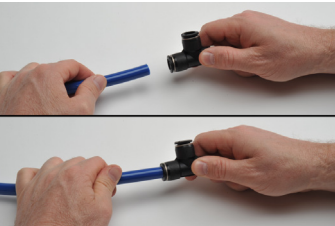


Prepare the **NITRA** tubing for cutting and make sure to have the proper tubing cutters like the **NITRA** TC-12 or TC-20.

(If cutting bonded tubing, carefully split the tubes with a knife and then pull apart as needed.)

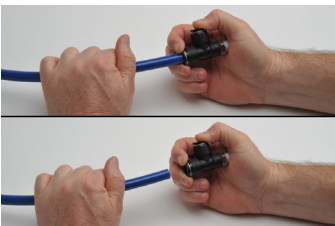


Cut the **NITRA** tubing at a right angle with the axis using a standard tube cutter. After cutting the tubing, make sure to check the cut end for an even cut with no debris.



Insertion of the **NITRA** tubing into fittings

- Make sure the tube is inserted fully into the fitting.
- Pull the tube gently to make sure it does not release.
- If the tube end is damaged or deformed, leakage or unexpected tube release may occur. Make sure to check tubing end thoroughly.



Removing the **NITRA** tubing from fittings

- Make sure the pressure in the tube is zero before releasing the tube from the fittings.
- To release the tubing, press the release ring at the end of the fitting and pull the tube with one hand.
- Inspect the released tube end and make a clean cut if it is damaged or deformed.

## Common Precautions for Tubing and Fitting Products

### Warnings:

- Do not use fittings with media other than air.
- Avoid installing with tubing under tension or with excessive bends.
- Do not use the product where weld spatters occur as fire may occur.
- Product damage or air leakage may occur at places where there is excessive rotation or vibration of the fittings.
- Use caution in water as the product may be damaged by surge pressure.
- Do not use the product where it is directly exposed to fluids such as cutting oil, lubricating oil, and coolant oil.

### Cautions:

- Assemble the tubing only after cleaning away impurities such as dust and excess debris.
- Fitting products are recommended for air systems only. Avoid using for other purposes.
- When using tubing other than NITRA brand with NITRA fittings, be sure the tubing OD conforms to the tolerances in Table 1 below.

**Table 1 - Tolerance of the Outer Diameter of the Tube**

Tube Specifications	ø5/32 [ø4]	ø1/4 [ø6]	ø5/16 [ø8]	ø3/8 [ø10]	ø1/2 [ø12]
Permissible tolerance	+ 0.005 [+/- 0.13]				

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TC-12



TC-20