



# 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 |         |                               |              |                                   |                   |                                     |                      |
|---------------------------------------------|---------|-------------------------------|--------------|-----------------------------------|-------------------|-------------------------------------|----------------------|
| Outside Diameter (in.)                      | 0.156   | Working Pressure (psi) @ 70°F |              | 350                               | Temp. Range       | -60°F to +200°F<br>(-51°C to +93°C) |                      |
| Inside Diameter (in.)                       | 0.106   | Burst Pressure (psi)          |              | 1050                              | Hardness          | Shore D 70                          |                      |
| Wall Thickness (in.)                        | 0.025   | Vacuum Rating                 |              | To 28" Hg                         | Bend Radius (in.) | 0.50                                |                      |
| 100 ft. Package Length                      |         |                               |              | 500 ft. Reel Length               |                   |                                     |                      |
| Part Number                                 | Price   | Color                         | PKG WT (lbs) | Part Number                       | Price             | Color                               | Package Weight (lbs) |
| <a href="#"><u>N532BLK100</u></a>           | \$17.50 | Black                         | 1.0          | <a href="#"><u>N532BLK500</u></a> | \$88.00           | Black                               | 3.0                  |
| <a href="#"><u>N532BLU100</u></a>           | \$17.50 | Blue                          |              | <a href="#"><u>N532BLU500</u></a> | \$88.00           | Blue                                |                      |
| <a href="#"><u>N532NAT100</u></a>           | \$17.50 | Natural                       |              | <a href="#"><u>N532NAT500</u></a> | \$88.00           | Natural                             |                      |
| <a href="#"><u>N532RED100</u></a>           | \$17.50 | Red                           |              | <a href="#"><u>N532RED500</u></a> | \$88.00           | Red                                 |                      |
| <a href="#"><u>N532YEL100</u></a>           | \$17.50 | Yellow                        |              | <a href="#"><u>N532YEL500</u></a> | \$88.00           | Yellow                              |                      |

| Nylon 1/4 in. Tubing Specifications |         |                               |              |                     |                   |                                     |                      |
|-------------------------------------|---------|-------------------------------|--------------|---------------------|-------------------|-------------------------------------|----------------------|
| Outside Diameter (in.)              | 0.250   | Working Pressure (psi) @ 70°F |              | 290                 | Temp. Range       | -60°F to +200°F<br>(-51°C to +93°C) |                      |
| Inside Diameter (in.)               | 0.180   | Burst Pressure (psi)          |              | 870                 | Hardness          | Shore D 70                          |                      |
| Wall Thickness (in.)                | 0.035   | Vacuum Rating                 |              | To 28" Hg           | Bend Radius (in.) | 1.25                                |                      |
| 100 ft. Package Length              |         |                               |              | 500 ft. Reel Length |                   |                                     |                      |
| Part Number                         | Price   | Color                         | PKG WT (lbs) | Part Number         | Price             | Color                               | Package Weight (lbs) |
| N14BLK100                           | \$28.00 | Black                         | 2.0          | N14BLK500           | \$145.00          | Black                               | 7.0                  |
| N14BLU100                           | \$28.00 | Blue                          |              | N14BLU500           | \$145.00          | Blue                                |                      |
| N14NAT100                           | \$28.50 | Natural                       |              | N14NAT500           | \$145.00          | Natural                             |                      |
| N14RED100                           | \$28.00 | Red                           |              | N14RED500           | \$145.00          | Red                                 |                      |
| N14YEL100                           | \$28.00 | Yellow                        |              | N14YEL500           | \$145.00          | Yellow                              |                      |

| Nylon 3/8 in. Tubing Specifications |         |                               |              |                     |                   |                                     |                      |
|-------------------------------------|---------|-------------------------------|--------------|---------------------|-------------------|-------------------------------------|----------------------|
| Outside Diameter (in.)              | 0.375   | Working Pressure (psi) @ 70°F |              | 250                 | Temp. Range       | -60°F to +200°F<br>(-51°C to +93°C) |                      |
| Inside Diameter (in.)               | 0.275   | Burst Pressure (psi)          |              | 750                 | Hardness          | Shore D 70                          |                      |
| Wall Thickness (in.)                | 0.050   | Vacuum Rating                 |              | To 28" Hg           | Bend Radius (in.) | 2.00                                |                      |
| 100 ft. Package Length              |         |                               |              | 500 ft. Reel Length |                   |                                     |                      |
| Part Number                         | Price   | Color                         | PKG WT (lbs) | Part Number         | Price             | Color                               | Package Weight (lbs) |
| N38BLK100                           | \$61.00 | Black                         | 3.0          | N38BLK500           | \$307.00          | Black                               | 12.0                 |
| N38BLU100                           | \$61.00 | Blue                          |              | N38BLU500           | \$307.00          | Blue                                |                      |
| N38NAT100                           | \$61.00 | Natural                       |              | N38NAT500           | \$307.00          | Natural                             |                      |
| N38RED100                           | \$61.00 | Red                           |              | N38RED500           | \$307.00          | Red                                 |                      |
| N38YEL100                           | \$61.00 | Yellow                        |              |                     |                   |                                     |                      |



# Nylon Pneumatic Tubing

| Nylon 1/2 in. Tubing Specifications |         |                               |              |                           |                   |                                     |                      |
|-------------------------------------|---------|-------------------------------|--------------|---------------------------|-------------------|-------------------------------------|----------------------|
| Outside Diameter (in.)              | 0.500   | Working Pressure (psi) @ 70°F |              | 240                       | Temp. Range       | -60°F to +200°F<br>(-51°C to +93°C) |                      |
| Inside Diameter (in.)               | 0.375   | Burst Pressure (psi)          |              | 720                       | Hardness          | Shore D 70                          |                      |
| Wall Thickness (in.)                | 0.062   | Vacuum Rating                 |              | To 28" Hg                 | Bend Radius (in.) | 3.50                                |                      |
| 100 ft. Package Length              |         |                               |              | 500 ft. Reel Length       |                   |                                     |                      |
| Part Number                         | Price   | Color                         | PKG WT (lbs) | Part Number               | Price             | Color                               | Package Weight (lbs) |
| <a href="#">N12BLK100</a>           | \$92.00 | Black                         | 4.0          | <a href="#">N12BLK500</a> | \$448.00          | Black                               | 19.0                 |
| <a href="#">N12BLU100</a>           | \$92.00 | Blue                          |              | <a href="#">N12BLU500</a> | \$448.00          | Blue                                |                      |
| <a href="#">N12NAT100</a>           | \$92.00 | Natural                       |              | <a href="#">N12NAT500</a> | \$448.00          | Natural                             |                      |
| <a href="#">N12RED100</a>           | \$92.00 | Red                           |              | <a href="#">N12RED500</a> | \$448.00          | Red                                 |                      |
| <a href="#">N12YEL100</a>           | \$92.00 | Yellow                        |              |                           |                   |                                     |                      |

| Nylon 6 mm Tubing Specifications |         |                               |              |                           |                  |                                     |                       |
|----------------------------------|---------|-------------------------------|--------------|---------------------------|------------------|-------------------------------------|-----------------------|
| Outside Diameter (mm)            | 6.0     | Working Pressure (psi) @ 70°F |              | 340                       | Temp. Range      | -60°F to +200°F<br>(-51°C to +93°C) |                       |
| Inside Diameter (mm)             | 4.0     | Burst Pressure (psi)          |              | 1020                      | Hardness         | Shore D 70                          |                       |
| Wall Thickness (mm)              | 1.0     | Vacuum Rating                 |              | To 28" Hg                 | Bend Radius (mm) | 32.0                                |                       |
| 100 ft. Package Length           |         |                               |              | 500 ft. Reel Length       |                  |                                     |                       |
| Part Number                      | Price   | Color                         | PKG WT (lbs) | Part Number               | Price            | Color                               | Package Weight (lbs)) |
| <a href="#">N6MBLK100</a>        | \$28.00 | Black                         | 1.0          | <a href="#">N6MBLK500</a> | \$144.00         | Black                               | 6.0                   |
| <a href="#">N6MBLU100</a>        | \$28.00 | Blue                          |              | <a href="#">N6MBLU500</a> | \$144.00         | Blue                                |                       |
| <a href="#">N6MNAT100</a>        | \$28.00 | Natural                       |              | <a href="#">N6MNAT500</a> | \$144.00         | Natural                             |                       |
| <a href="#">N6MRED100</a>        | \$27.00 | Red                           |              | <a href="#">N6MRED500</a> | \$138.00         | Red                                 |                       |
| <a href="#">N6MYEL100</a>        | \$27.00 | Yellow                        |              |                           |                  |                                     |                       |

| Nylon 8 mm Tubing Specifications |         |                               |              |                           |                  |                                     |                      |
|----------------------------------|---------|-------------------------------|--------------|---------------------------|------------------|-------------------------------------|----------------------|
| Outside Diameter (mm)            | 8.0     | Working Pressure (psi) @ 70°F |              | 250                       | Temp. Range      | -60°F to +200°F<br>(-51°C to +93°C) |                      |
| Inside Diameter (mm)             | 6.0     | Burst Pressure (psi)          |              | 750                       | Hardness         | Shore D 70                          |                      |
| Wall Thickness (mm)              | 1.0     | Vacuum Rating                 |              | To 28" Hg                 | Bend Radius (mm) | 38.0                                |                      |
| 100 ft. Package Length           |         |                               |              | 500 ft. Reel Length       |                  |                                     |                      |
| Part Number                      | Price   | Color                         | PKG WT (lbs) | Part Number               | Price            | Color                               | Package Weight (lbs) |
| <a href="#">N8MBLK100</a>        | \$41.50 | Black                         | 2.0          | <a href="#">N8MBLK500</a> | \$209.00         | Black                               | 9.0                  |
| <a href="#">N8MBLU100</a>        | \$41.50 | Blue                          |              | <a href="#">N8MBLU500</a> | \$209.00         | Blue                                |                      |
| <a href="#">N8MNAT100</a>        | \$41.50 | Natural                       |              | <a href="#">N8MNAT500</a> | \$209.00         | Natural                             |                      |
| <a href="#">N8MRED100</a>        | \$40.00 | Red                           |              | <a href="#">N8MRED500</a> | \$201.00         | Red                                 |                      |
| <a href="#">N8MYEL100</a>        | \$40.00 | Yellow                        |              |                           |                  |                                     |                      |

| Nylon 10 mm Tubing Specifications |         |                               |              |           |                                                    |
|-----------------------------------|---------|-------------------------------|--------------|-----------|----------------------------------------------------|
| Outside Diameter (mm)             | 10.0    | Working Pressure (psi) @ 70°F |              | 225       | Temp. Range<br>-60°F to +200°F<br>(-51°C to +93°C) |
| Inside Diameter (mm)              | 8.0     | Burst Pressure (psi)          |              | 675       | Hardness<br>Shore D 70                             |
| Wall Thickness (mm)               | 1.0     | Vacuum Rating                 |              | To 28" Hg | Bend Radius (mm)<br>51.0                           |
| 100 ft. Package Length            |         |                               |              |           |                                                    |
| Part Number                       | Price   | Color                         | PKG WT (lbs) |           |                                                    |
| N10MBLK100                        | \$54.00 | Black                         | 2.0          |           |                                                    |
| N10MBLU100                        | \$54.00 | Blue                          |              |           |                                                    |
| N10MNAT100                        | \$54.00 | Natural                       |              |           |                                                    |
| N10MRED100                        | \$54.00 | Red                           |              |           |                                                    |
| N10MYEL100                        | \$54.00 | Yellow                        |              |           |                                                    |



# Nylon Pneumatic Tubing

| Nylon 12 mm Tubing Specifications |         |                               |              |                  |                                     |
|-----------------------------------|---------|-------------------------------|--------------|------------------|-------------------------------------|
| Outside Diameter (mm)             | 12.0    | Working Pressure (psi) @ 70°F | 200          | Temp. Range      | -60°F to +200°F<br>(-51°C to +93°C) |
| Inside Diameter (mm)              | 10.0    | Burst Pressure (psi)          | 600          | Hardness         | Shore D 70                          |
| Wall Thickness (mm)               | 1.0     | Vacuum Rating                 | To 28" Hg    | Bend Radius (mm) | 63.5                                |
| 100 ft. Package Length            |         |                               |              |                  |                                     |
| Part Number                       | Price   | Color                         | PKG WT (lbs) |                  |                                     |
| <a href="#">N12MBLK100</a>        | \$89.00 | Black                         | 4.0          |                  |                                     |
| <a href="#">N12MBLU100</a>        | \$89.00 | Blue                          |              |                  |                                     |
| <a href="#">N12MNAT100</a>        | \$94.00 | Natural                       |              |                  |                                     |

## NITRA Pneumatic Tubing Accessories

| Pneumatic Tubing Cutter      |                                                                                                                                           |                |                             |              |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------|--------------|
| <i>Part Number</i>           | <i>Description</i>                                                                                                                        | <i>Pcs/Pkg</i> | <i>Package Weight (lbs)</i> | <i>Price</i> |
| <a href="#"><u>TC-12</u></a> | 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                         | \$5.75       |
| <a href="#"><u>TC-20</u></a> | 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                         | \$12.00      |



[TC-12](#)



[TC-20](#)



# Tubing Working Pressure Ratings

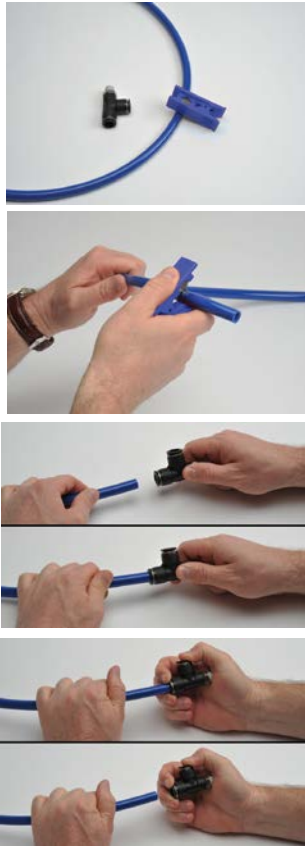
| Nylon Tubing Working Pressure Ratings (psi) |             |                |                |                |
|---------------------------------------------|-------------|----------------|----------------|----------------|
| Size O.D.                                   | 70°F (21°C) | 100°F (37.8°C)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

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

### Pneumatic Tubing Cutter

| Part Number                  | Description                                                                                                                               | Pcs/Pkg | Wt (lb) | Price   |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|
| <a href="#"><u>TC-12</u></a> | 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     | \$5.75  |
| <a href="#"><u>TC-20</u></a> | 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     | \$12.00 |



[TC-12](#)



[TC-20](#)