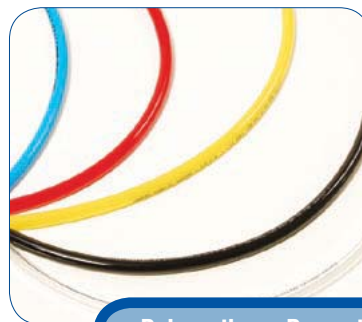


Polyurethane Tubing For Extensive Flexing Applications

Polyurethane tubing is usually the best choice for applications requiring extensive flexing, a small bend radius or where kinking can be a problem. Nycoil uses a raw material that will not break down or be affected in any way by moisture. Being a naturally rubbery compound, it requires no plasticizers that can leach out over time. This material also offers superior resistance to grease, oils, fuels and abrasion, making it suitable for a wide variety of applications.

Since Nycoil's Push-To-Connect Fittings have the highest gripping "force" as compared to other brands, it is assured that our tubing will always work with our fittings. However, when using Push-To-Connect Fittings from other manufacturers with any brand of Polyurethane tubing, testing for retention reliability is strongly recommended. Further, we recommend using only Polyurethane tubing made from 95A Durometer hardness compound with Push-To-Connect Fittings. In addition, compression type fittings should never be used with Polyurethane tubing of any hardness.



Polyurethane Products

- Pneumatic Tubing
- EZ Strip™
- Mini-Coils

Polyurethane Property Overview

- Extreme Flexibility
- Reduced Bend Radius
- Moisture Resistant
- Abrasion Resistant
- Temperature Range:
-40°F to +165°F (-40°C to +75°C)

Typical Applications

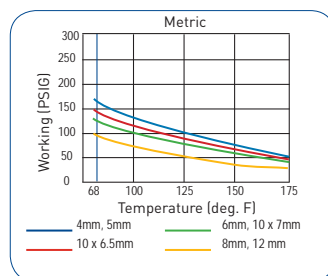
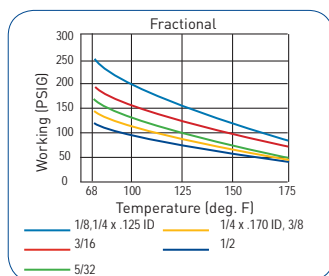
- Water & Pneumatic Lines
- Spot Welders
- Machines
- Tools
- Pneumatic Plumbing
- Pick & Place Automation

95A Durometer Polyurethane Tubing

Although 95A Durometer is the hardest compound used for Nycoil's Polyurethane tubing, it is still flexible and has a smaller bend radius (without kinking) than most other plastic tubing. Produced from raw materials that resists moisture, fungus, abrasion and a broad range of chemicals making it a popular choice for many applications.

A wide selection of colors makes it adaptable to the functional and aesthetic requirements of most pneumatic circuits and equipment. 95A Durometer Polyurethane Tubing can be used with most brands of Push-To-Connect or Hose Barb Fittings.

PNEUMATIC TUBING



95A Durometer Polyurethane Fractional Inch Tubing

| Tube O.D. | Tube I.D. | Wall Thickness | Part Number | | | Min. Bend Radius | Weight | Working Pressure | | | Burst Pressure |
|-----------|-----------|----------------|-------------|--------|-------|------------------|--------------|------------------|-----------|----------|----------------|
| | | | 100' | 500' | 1000' | | | PSI@68°F | PSI@125°F | PSI@68°F | |
| inch | inch | inch | Reel | Reel | Reel | inch | 1000' (lbs.) | | | | |
| 1/8 | 0.062 | 0.031 | 6322_ | 6722_ | 6622_ | 1/4 | 4.7 | 267 | 160 | 800 | |
| 5/32 | 0.093 | 0.031 | 6325_ | 6725_ | 6625_ | 3/8 | 6.2 | 167 | 100 | 500 | |
| 3/16 | 0.107 | 0.040 | 6333_ | 6733_ | 6633_ | 3/8 | 10 | 200 | 120 | 600 | |
| 1/4 | 0.170 | 0.040 | 6344_ | 6744_ | 6645_ | 1/2 | 13.6 | 133 | 80 | 400 | |
| 1/4 | 0.125 | 0.062 | 6346_ | 6746_ | 6646_ | 3/4 | 18.8 | 267 | 160 | 800 | |
| 3/8 | 0.250 | 0.062 | 6366_ | 6766_ | 6667_ | 1 | 21.3 | 133 | 80 | 400 | |
| 1/2 | 0.320 | 0.090 | 6387_ | 6787_* | 6687_ | 2 | 59.6 | 150 | 90 | 450 | |

Color Code - Suffix Key

0 = Clear 2 = Red 4 = Green 6 = Orange 9 = White 13 = Transparent Blue 15 = Transparent Yellow
 1 = Black 3 = Blue 5 = Yellow 7 = Gray 12 = Transparent Red 14 = Transparent Green 16 = Transparent Orange

* Indicates 250' Reel. Adding a Color Code Suffix to the part number is required. If no color is selected, Clear (0) Color will be supplied. Custom sizes, lengths and colors are available. Please consult the factory with your specifications.

95A Durometer Polyurethane Metric Tubing

| Tube O.D. | Tube I.D. | Wall Thickness | Part Number | | | Min. Bend Radius | Weight | Working Pressure | | | Burst Pressure |
|-----------|-----------|----------------|-------------|-------|-------|------------------|--------------|------------------|-----------|----------|----------------|
| | | | 100' | 500' | 1000' | | | PSI@68°F | PSI@125°F | PSI@68°F | |
| mm | mm | mm | Reel | Reel | Reel | mm | 1000' (lbs.) | | | | |
| 4 | 2.5 | 0.75 | 7303_ | 7603_ | 7903_ | 12 | 6 | 167 | 100 | 500 | |
| 5 | 3 | 1 | 7305_ | 7605_ | 7905_ | 15 | 10.1 | 167 | 100 | 500 | |
| 6 | 4 | 1 | 7306_ | 7606_ | 7906_ | 18 | 12.6 | 133 | 80 | 400 | |
| 8 | 6 | 1 | 7308_ | 7608_ | 7908_ | 24 | 17.6 | 97 | 58 | 290 | |
| 10 | 6.5 | 1.75 | 7310_ | 7610_ | 7910_ | 25 | 36.1 | 150 | 90 | 450 | |
| 12 | 9 | 1.5 | 7313_ | 7613_ | 7913_ | 48 | 39.5 | 97 | 58 | 290 | |

| Color Code |
|------------|
| Suffix Key |
| 0 = Clear |
| 1 = Black |
| 2 = Red |
| 3 = Blue |
| 4 = Green |

Adding a Color Code suffix to the part number is required. If no Color code is selected, Clear (0) color will be supplied. Custom sizes, cut lengths, reel lengths and colors are available upon request - contact Customer Service. Please refer to the Technical Section for working pressure charts and chemical resistance.

Media to Plastic Tubing Material Compatibility Guide

| Media | PE | N | U | PVDF |
|-----------------------|----|---|---|------|
| Acetone | P | G | P | P |
| Acetyl Bromide | L | P | - | - |
| Acetyl Chloride | L | P | - | G |
| Air | G | G | G | G |
| Alcohols | G | G | L | G |
| Aluminum Salts | G | G | G | - |
| Ammonia | G | G | G | G |
| Amyl Acetate | G | G | L | G |
| Aniline | L | P | P | G |
| Animal Oils | P | G | G | G |
| Arsenic Salts | G | G | G | - |
| Aromatic Hydrocarbons | P | G | L | G |
| Barium Salts | G | G | G | - |
| Benzaldehyde | P | L | L | G |
| Benzene | P | G | L | G |
| Benzyl Alcohol | P | L | L | G |
| Bleaching Liquors | G | L | L | - |
| Boric Acid Solutions | G | G | G | G |
| Bromine | L | P | P | G |
| Butane | L | G | P | G |
| Butanol | G | G | G | - |
| Butyl Acetate | G | G | L | G |
| Calcium Hypochlorite | L | P | P | G |
| Calcium Salts | G | G | G | - |
| Carbon Dioxide | G | G | G | G |
| Carbon Disulfide | L | L | L | G |
| Carbon Tetrachloride | P | L | P | G |
| Caustic Potash | G | G | G | G |
| Caustic Soda | G | G | G | G |
| Chloracetic Acid | L | L | P | G |
| Chlorine (Dry) | L | P | P | G |
| Chlorine (Wet) | L | P | L | G |
| Chlorobenzene | P | L | L | G |
| Chloroform | P | P | P | G |
| Chromic Acid | L | P | P | G |
| Copper Salts | G | G | G | - |
| Cresol | P | P | P | G |
| Cyclohexanone | L | L | P | G |
| Ethers | L | G | P | G |
| Ethyl Acetate | G | G | L | G |
| Ethyl Alcohol | G | L | G | - |
| Ethylamine | L | L | L | - |
| Ethyl Bromide | P | L | - | G |
| Ethyl Chloride | P | L | - | G |
| Fatty Acids | L | G | L | G |

| Media | PE | N | U | PVDF |
|---------------------------------|----|---|---|------|
| Ferric Salts | G | G | G | - |
| Formaldehyde | G | L | P | G |
| Formic Acid | G | P | P | G |
| Freon | L | G | L | # |
| Gasoline | P | G | L | G |
| Glucose | G | G | G | G |
| Glycerin | G | G | L | G |
| Hydriodic Acid | L | P | - | - |
| Hydrochloric Acid. (Conc.) | L | L | P | G |
| Hydrochloric Acid. (Med. Conc.) | L | L | P | G |
| Hydrofluoric Acid | L | P | P | G |
| Hydrogen Peroxide (Conc.) | L | L | L | L |
| Hydrogen Peroxide (Dil.) | L | G | G | G |
| Hydrogen Sulfide | G | G | P | G |
| Iodine | L | G | L | G |
| Kerosene | L | G | L | G |
| Ketones | G | G | P | G |
| Lacquer Solvents | L | G | - | G |
| Lactic Acid | G | G | G | G |
| Lead Acetate | G | G | G | G |
| Linseed Oil | L | G | G | G |
| Magnesium Salts | G | G | G | - |
| Naphtha | L | G | L | G |
| Natural Gas | L | G | G | G |
| Nickel Salts | G | G | G | - |
| Nitric Acid (Conc.) | P | P | P | G |
| Nitric Acid (Dil.) | P | L | P | G |
| Nitrobenzene | P | L | P | G |
| Nitrogen Oxides | L | L | - | - |
| Nitrous Acid | L | L | L | G |
| Oils (Animal and Mineral) | L | G | G | G |
| Oils (Vegetable) | L | G | G | G |
| Oxygen | G | G | G | G |
| Perchloric Acid | P | P | P | G |
| Phenols | P | P | P | G |
| Potassium Salts | G | G | G | - |
| Pyridine | L | L | P | G |
| Silver Nitrate | G | G | G | G |
| Soap Solutions | G | G | G | G |
| Sodium Salts | G | G | G | - |
| Stearic Acid | L | G | L | G |
| Sulfur Chloride | L | L | - | G |
| Sulfuric Acid (Conc.) | P | P | P | - |
| Sulfuric Acid (Dil.) | P | L | L | - |
| Sulfurous Acid | P | L | L | G |

(Cont.)

| Media | PE | N | U | PVDF |
|----------------------|----|---|---|------|
| Tannic Acid | G | G | P | G |
| Tanning Extracts | G | G | P | - |
| Titanium Salts | G | G | G | - |
| Toluene | P | G | L | L |
| Trichloroacetic Acid | L | P | P | L |
| Trichloroethylene | P | L | P | L |
| Turpentine | P | G | L | G |
| Urea | G | G | G | G |
| Uric Acid | G | G | G | - |
| Water | G | G | G | G |
| Xylene | P | G | P | G |
| Zinc Chloride | G | G | G | G |

| MATERIAL CODE FOR THERMOPLASTIC TUBING | |
|--|---------------------------------|
| N | Flexible Nylon |
| PE | Linear Low Density Polyethylene |
| U | Polyurethane |

| MATERIAL CODE FOR FLUOROPOLYMER TUBING | |
|--|-------------------------|
| PVDF | Polyvinylidene Fluoride |

| RATINGS CODE | | |
|--------------|---|--|
| G | — | Good to excellent. Little or no swelling, tensile or surface changes. Preferred choice. |
| L | — | Marginal or conditional. Noticeable effects but not necessarily indicating lack of serviceability. Further testing suggested for specific application. Very long-term effects such as stiffening or potential for crazing should be evaluated. |
| P | — | Poor or unsatisfactory. Not recommended without extensive and realistic testing. |
| — | — | Indicates that this was not tested. |
| # | — | For fluoropolymer. Indicates good chemical resistance but potential for excessive permeation. |

Notes:

The Fluid Compatibility Guides are simplified rating tabulations based on immersion tests at 75°F. Higher temperatures tend to reduce ratings. Since final selection depends on pressure, fluid and ambient temperature and other factors not known to Parker Hannifin Co., no performance guarantee is expressed or implied. Ratings do not imply compliance with specialized codes such as FDA, NSF, AGA or UL and do not cover possible fluid discoloration, taste or odor effects. For conveying foodstuffs use FDA sanctioned materials, and for potable water use NSF listed materials. For chemicals not listed, or for advice on particular applications, please consult Product Engineering at Nycoil. Hose applications for these fluids must take into account legal and insurance regulations. This does not imply AGA or UL compliance.

Chemical compatibility does not imply low permeation rates. Consult the Nycoil for a suggestion for your specific requirement.

Does not imply NSF or FDA compliance.

Chemical compatibility does not imply acceptability for use in airless paint spray applications. These applications require a special conductive hose.

Fluoropolymers are chemically compatible with Anhydrous Ammonia. However, extreme caution must be used in dealing with Anhydrous Ammonia since it can cause severe injuries such as blindness and/or chemical burns.