

Nylon Tubing The Nylon Advantage

Nylon tubing is a popular choice for low pressure pneumatic applications because of its combination of flexibility and toughness. Nycoil uses a heat and light stabilized, very flexible compound that yields a quality tube. Nylon is the most recommended tubing material for all types of pneumatic circuits.

A circuit designer could never get into trouble using Nylon tubing for pneumatic circuits. Due to its physical properties, Nylon is the number one choice for reliable connections with all types of fittings. Nylon retains its performance integrity in elevated temperatures and generally, because of its higher

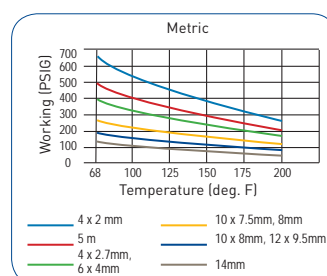
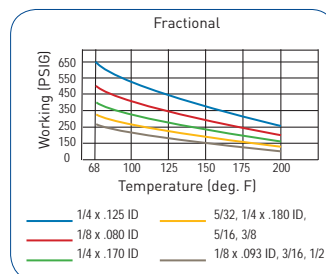
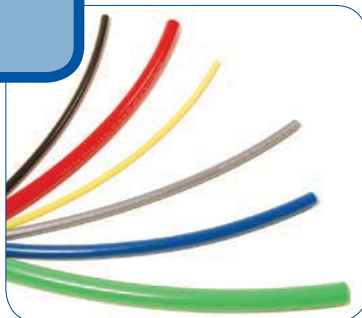
pressure and temperature characteristics, Nylon will have a greater flow passage than composite tubing made from other material with the same outside diameter. These factors should never be overlooked when designing pneumatic circuits.

Nylon Property Overview

- Flexible
- Good Chemical Resistance
- Low Moisture Absorption
- Superior Dimensional Stability
- Temperature Range:
-40°F to +200°F (-40°C to +93°C)

Typical Applications

- Low Pressure Pneumatic
- Pneumatic Circuits
- Injection Lube Systems
- Hydro-Pneumatic Circuit



Nylon Products

- Pneumatic Tubing
- Mini-Coils
- Capillary Tubing

Nylon 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	
inch	inch	inch	Reel	Reel	Reel	inch	1000' (lbs.)			PSI@68°F
1/8	0.080	0.023	6121_	6521_	6021_	1/4	3.3	500	350	1500
1/8	0.093	0.016	6122_	6522_	6022_	1/2	2.5	267	187	800
5/32	0.106	0.025	6123_	6523_	6023_	5/8	4.8	333	233	1000
3/16	0.137	0.025	6133_	6533_	6033_	3/4	5.8	267	187	800
1/4	0.180	0.035	6144_	6544_	6044_	7/8	10.9	333	233	1000
1/4	0.125	0.062	6146_	6546_	6046_	1-1/4	16.9	667	467	2000
1/4	0.170	0.040	6147_	6547_	6047_	7/8	12.2	400	280	1200
5/16	0.232	0.040	6155_	6555_	6055_	1	15.7	333	233	1000
3/8	0.275	0.050	6166_	6566_	6066_	1-1/4	23.3	333	233	1000
1/2	0.375	0.062	6188_	6888_ *	6088_	2-1/4	39	267	187	800

Color Code
Suffix Key
0 = Natural
1 = Black
2 = Red
3 = Blue
4 = Green
5 = Yellow
6 = Orange
7 = Gray

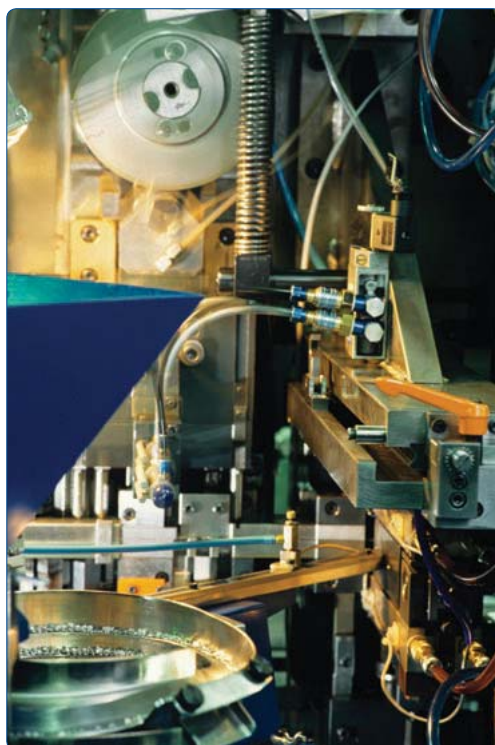
Nylon Metric Tubing

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	
mm	mm	mm	Reel	Reel	Reel	mm	1000' (lbs.)			PSI@68°F
4	2.7	0.65	7104_	7404_	7704_	24	3.8	367	257	1100
4	2	1	7102_	7402_	7702_	24	6.8	667	467	2000
5	3	1	7105_	7405_	7705_	30	9	500	350	1500
6	4	1	7106_	7406_	7706_	36	11.2	400	280	1200
8	6	1	7108_	7408_	7708_	48	15.8	283	198	850
10	8	1	7111_	7411_	7711_	60	20.2	200	140	600
10	7.5	1.25	7110_	7410_	7710_	70	24.6	267	187	800
12	9.5	1.25	7112_	7412_	7712_	70	30.1	233	163	700
14	12	1	7116_	-	-	100	29.1	133	93	400

Color Code
Suffix Key
0 = Natural
1 = Black
2 = Red
3 = Blue
4 = Green

* Indicates 250' Reel

Adding a Color Code suffix to the part number is required. If no Color code is selected, Natural (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.