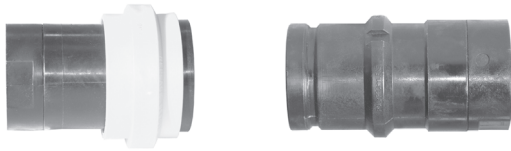


Polypropylene Non-Spill Chemical Transfer Couplings

The non-spill coupling virtually eliminate fluid loss upon disconnection and is designed to help meet the demand for closed system transfer and dispensing of chemicals with minimal environmental contamination. The push-to-connect design allows ease of connection/disconnection, and the flush valve enables ease of cleaning. They can be used with concentrated or diluted agricultural chemicals when transferring from bulk storage tanks, returnable containers, applicators, etc.



Materials:

- Body - polypropylene
- Springs - 316 stainless steel
- Seals - chemical resistant fluorocarbon

Size	Pressure Ratings	Coupler Part #	Price/E	Nipple Part #	Price/E
1/2"	100 PSI at 68°F	PFC50	\$62.90	PFN50	\$30.00
1"	60 PSI at 68°F	PFC100	78.00	PFN100	55.00
2"	100PSI at 68°F	PFC200	197.05	PFN200	97.75

NEW Acetal Push-On Fittings

Construction:

- Material - acetal copolymer
- O-ring - nitrile rubber
- Three piece construction, body, collet and O-ring preassembled
- Collets are produced with stainless steel locking teeth

Working Pressure and Temperature Range:

- Temperature range: -20°F (-20°C) to 185°F (85°C)
- Maximum water pressure: 1/4" - 230 PSI; 3/8", 1/2" - 170 PSI

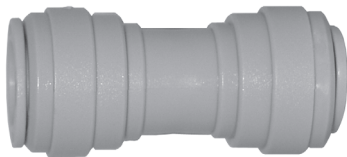
Advantages:

- FDA compliant and NSF 51 listed non toxic material
- Easy to install - no tools required. Easy to disconnect and reuse

Applications:

- Water conditioning, filtration, reverse osmosis, soft drink, beer and condiment dispensing equipment where no metal contamination can be present.
- Industrial applications include low pressure pneumatic, hydraulic and vacuum lines commonly used in packaging systems, robotics, machine tools, agricultural spraying, car and industrial wash systems and air logic systems.

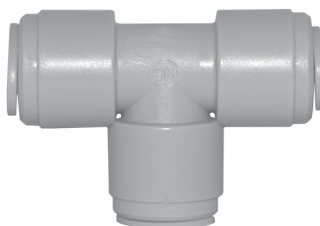
NEW Push-on Straight Unions



Tube to tube

Tube O.D.	Acetal Part #	Price / Each
1/4"	462-4	\$2.55
3/8"	462-6	3.40
3/8" x 1/4"	462-64	3.45
1/2"	462-8	4.10
1/2" x 3/8"	462-86	4.70

Push-on Union Tees



Tube all ends

Tube O.D.	Branch	Acetal Part #	Price / Each
1/4"	1/4"	464-4	\$3.65
3/8"	3/8"	464-6	4.95
3/8"	1/4"	464-664	5.05
1/2"	1/2"	464-8	6.35

Push-on Union Elbows**NEW**

Tube both ends

Tube O.D.	Acetal Part #	Price / Each
1/4"	465-4	\$2.85
3/8"	465-6	4.45
3/8" x 1/4"	465-64	4.45

**Push-on Female Adapters****NEW**

Tube to female NPT

Tube O.D.	Pipe Thread	Acetal Part #	Price / Each
1/4"	1/4"	466-4B	\$3.90
3/8"	1/4"	466-6B	4.45

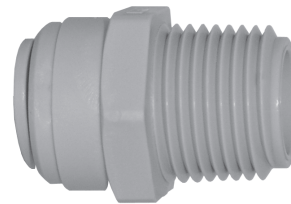


F

Push-on Male Adapters**NEW**

Tube to male NPT

Tube O.D.	Pipe Thread	Acetal Part #	Price / Each
1/4"	1/8"	468-4A	\$2.45
1/4"	1/4"	468-4B	2.60
1/4"	3/8"	468-4C	2.75
3/8"	1/8"	468-6A	3.70
3/8"	1/4"	468-6B	2.75
3/8"	3/8"	468-6C	3.15
3/8"	1/2"	468-6D	4.85
1/2"	3/8"	468-8C	4.30
1/2"	1/2"	468-8D	4.65

**Push-on 360° Swivel Elbows****NEW**

Tube to male NPT

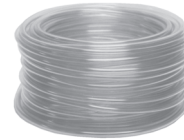
Tube O.D.	Pipe Thread	Acetal Part #	Price
1/4"	1/8"	469S-4A	\$4.60
1/4"	1/4"	469S-4B	4.85
3/8"	1/4"	469S-6B	5.25
3/8"	3/8"	469S-6C	7.00



Clear PVC Tubing

Clear PVC Tubing is designed to be used with standard shank fittings.

Tubing sold only in lengths shown below.



Domestic

Size I.D. x O.D.	Length	Part #	Price p/length	Working Pressure
3/16" x 5/16"	100	CL0305	\$21.50	55
1/4" x 3/8"	100	CL0406	24.25	45
1/4" x 1/2"	100	CL0408	51.25	70
5/16" x 7/16"	100	CL0507	28.00	45
3/8" x 1/2"	100	CL0608	34.25	45
3/8" x 5/8"	100	CL0610	66.00	55
1/2" x 5/8"	100	CL0810	46.00	30
1/2" x 3/4"	100	CL0812	77.00	50
5/8" x 7/8"	100	CL1014	90.00	40
3/4" x 1"	100	CL1216	103.00	40
1" x 1-1/4"	100	CL1620	129.00	35
1-1/4" x 1-3/4"	100	CL2028	355.00	40
1-1/2" x 2"	50	CL2432	218.00	35

Imported

Size I.D. x O.D.	Length	Part #	Price p/length	Working Pressure
---	---	---	---	---
1/4" x 3/8"	100	ICL0406	\$15.50	50
---	---	---	---	35
---	---	---	---	35
3/8" x 1/2"	100	ICL0608	20.00	---
---	---	---	---	---
1/2" x 5/8"	100	ICL0810	26.00	50
1/2" x 3/4"	100	ICL0812	55.00	---
---	---	---	---	---
3/4" x 1"	100	ICL1216	61.00	35
1" x 1-1/4"	100	ICL1620	79.00	30
---	---	---	---	---
1-1/2" x 2"	50	ICL2432	169.00	15

- Produced from FDA materials, but not FDA approved.
- For non-critical hospital use such as suction and draining.
- Recommended working pressure is at **72°F**
- Maximum temperature: **135°F**
- Individually boxed

- Temperature range: **14°F to 149°F**
- Recommended working pressure is at **72°F**
- Shipped in bundles wrapped with PVC film

Clear Braided PVC Tubing

Tubing sold only in lengths shown below.



Domestic

Size I.D. x O.D.	Length	Part #	Price p/length	Working Pressure
3/16" x 3/8"	300	BR0306~	\$125.00	250
1/4" x 7/16"	300	BR0446	158.00	250
5/16" x 17/32"	300	BR0553~	171.00	250
3/8" x 5/8"	300	BR0609	195.00	225
1/2" x 3/4"	300	BR0812	279.00	200
5/8" x 7/8"	300	BR1014	340.00	200
3/4" x 1-1/16"	300	BR1218	493.00	150
1" x 1-5/16"	200	BR1621	428.00	125
1-1/4" x 1-11/16"	100	BR2027	345.00	100
1-1/2" x 1-15/16"	100	BR2431	416.00	100

Imported

Size I.D. x O.D.	Length	Part #	Price p/length	Working Pressure
---	---	---	---	---
---	---	---	---	---
1/4" x 1/2"	300	IBR0446	\$129.00	142
3/8" x 5/8"	300	IBR0609	165.00	114
1/2" x 3/4"	300	IBR0812	208.00	100
---	---	---	---	---
3/4" x 1-1/16"	300	IBR1218	406.00	71
1" x 1-5/16"	200	IBR1621	346.00	71
---	---	---	---	---
---	---	---	---	---

- Produced from FDA materials, but not FDA approved
- Recommended working pressure is at **72°F**
- High grade tensile strength polyester yarn reinforcement
- Temperature range: **27°F to 150°F**
- 1 1/4" and 1 1/2" is shipped coiled, other sizes shipped spooled.

- Temperature range: **14°F to 149°F**
- For various machine tools and transportation of chemicals
- Shipped in bundles wrapped with PVC film

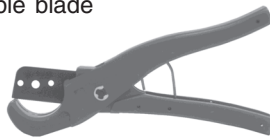
Tubing and Hose Cutters

- Leaves tube unaltered after cut
- Compact and lightweight
- Maximum O.D. 9/16"



Part #	Price/E
TC97	\$11.50
TC97RB (repl. blade)	4.00

- Cuts low pressure fabric reinforced hose up to 1" O.D.
- Reversible blade



Part #	Price/E
HC90	\$19.00
HC90RB (repl. blade)	9.00

- Cuts hose and tubing up to 2" O.D.; P.E. up to 1 1/2" I.D.; PVC up to 1 1/4" I.D.
- Stainless steel blade



Part #	Price/E
LHC95	\$28.00
LHC95RB (repl. blade)	13.25

Properties of Tuff-Lite Materials

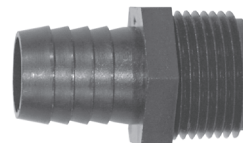
Nylon fittings are generally acceptable for working pressures up to **150 PSI** at normal room temperatures. At very low pressures, temperatures can approach **175° F** with no degradation of the fittings strength. Nylon fittings should not be used with acid-based fertilizers, bromine, chlorine, fluorine, hydrochloric acid, iodine, nitric acid, phosphoric acid, sulfuric acid or xylene. Made with material approved by NSF and FDA. Nylon should not be used with compressed gas. Parts are white.

Polypropylene should not be used with aromatic hydrocarbons, carbon tetra-chloride, gasoline, hexane, kerosene, nitric acid, sodium hydrochlorite, toluene, trichloroethylene or xylene. Polypropylene should not be used with compressed gas. Parts are black.

Tuff-Lite Inserts



Nylon



Polypropylene

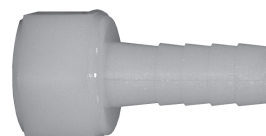
Hose Size	NPT	Nylon Part #	Price/Ea	Pkg Qty
1/4"	1/8"	TN21	\$.545	50
	1/4"	TN22	.560	50
	3/8"	TN23	.615	50
	1/2"	TN24	.680	50
	3/4"	TN26	.720	50
	1"	TN28~	1.12	50
5/16"	1/4"	TN252	.570	50
3/8"	1/8"	TN31	.645	50
	1/4"	TN32	.700	50
	3/8"	TN33	.735	50
	1/2"	TN34	.800	50
	3/4"	TN36	.865	50
1/2"	1/8"	TN41~	.575	50
	1/4"	TN42	.610	50
	3/8"	TN43	.635	50
	1/2"	TN44	.720	50
1/2"	3/4"	TN46	.820	50
5/8"	3/8"	TN53	.680	50
	1/2"	TN54	.760	50
	3/4"	TN56	.885	50
3/4"	3/8"	TN63	.670	50
	1/2"	TN64	.860	50
	3/4"	TN66	.945	50
	1"	TN68	1.100	25
1"	3/4"	TN86	1.030	25
	1"	TN88	1.250	25
1-1/4"	1"	TN158	1.890	15
	1-1/4"	TN150	3.020	10
	1-1/2"	TN1520	3.190	10
1-1/2"	1-1/4"	TN2015	2.860	10
	1-1/2"	TN200	3.230	10
2"	2"	TN250	4.350	5

Hose Size	NPT	Polypropylene Part #	Price/Ea	Pkg Qty
1/4"	1/8"	PPN21	\$.49	50
	1/4"	PPN22	.48	50
	3/8"	PPN23	.50	50
	1/2"	PPN24	.57	50
	3/4"	---	---	---
	1"	---	---	---
5/16"	1/4"	---	---	---
3/8"	1/8"	PPN31~	.49	50
	1/4"	PPN32	.48	50
	3/8"	PPN33	.46	50
	1/2"	PPN34	.61	50
	3/4"	PPN36	.70	50
1/2"	1/8"	---	---	---
	1/4"	PPN42	.50	50
	3/8"	PPN43	.57	50
	1/2"	PPN44	.64	50
1/2"	3/4"	PPN46	.70	50
5/8"	3/8"	---	---	---
	1/2"	PPN54	.60	50
	3/4"	PPN56	.80	50
3/4"	3/8"	---	---	---
	1/2"	PPN64	.67	50
	3/4"	PPN66	.71	50
	1"	PPN68	1.00	25
1"	3/4"	PPN86	.96	25
	1"	PPN88	1.04	25
1-1/4"	1"	---	---	---
	1-1/4"	PPN150	2.25	10
	1-1/2"	---	---	---
1-1/2"	1-1/4"	---	---	---
	1-1/2"	PPN200	2.60	10
2"	2"	PPN250	3.50	5

Tuff-Lite Female Inserts

Ball Seat Hose Insert x Female NPS

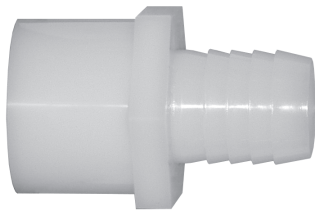
Hose Size	NPS Size	Nylon Part #	Price / Ea
1/4"	1/4"	TF22	\$.765
3/8"	3/8"	TF33	.855



Nylon

Parts showing package quantities sold in package quantities only.

NEW Tuff-Lite Barbed Fittings



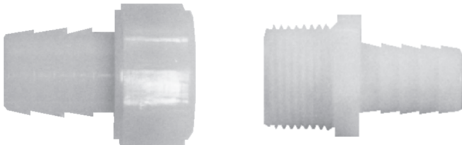
Nylon

Female NPT x Hose Barb

Hose Size	Female NPT	Nylon Part #	Price/Ea
1/4"	1/4"	TFS22	\$1.85
3/8"	1/2"	TFS42	2.00
1/2"	1/2"	TFS44	1.30
3/4"	3/4"	TFS66	2.05

Tuff-Lite Short Shank Couplings

F



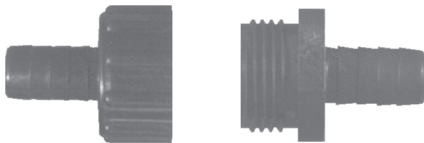
Nylon

Female *

Male

Hose Size	Thread	Nylon Part #	Price/Ea	Nylon Part #	Price/Ea	Pkg Qty
1/4"	3/4" NPSM	TCF62	\$1.24	TN26	\$.720	50
3/8"	3/4" NPSM	TCF63	1.23	TN36	.865	50
1/2"	3/4" NPSM	TCF64	1.28	TN46	.820	50
5/8"	3/4" NPSM	TCF65	1.31	TN56	.885	50
3/4"	3/4" NPSM	TCF66	1.29	TN66	.945	50
1/4"	3/4" GHT	TCF72	\$1.48	TCM72	\$.765	---
3/8"	3/4" GHT	TCF73	1.49	TCM73	.765	---
1/2"	3/4" GHT	TCF74	1.52	TCM74	.840	---
5/8"	3/4" GHT	TCF75	1.54	TCM75	.850	---
3/4"	3/4" GHT	TCF76	1.54	TCM76	.840	---

* Female shipped with gasket



Polypropylene

Female *

Male

Hose Size	Thread	Poly. Part #	Price/Ea	Poly. Part #	Price/Ea
1/4"	3/4" GHT	PPCF72	\$1.11	---	---
3/8"	3/4" GHT	PPCF73	1.10	PPCM73	\$.71
1/2"	3/4" GHT	PPCF74	1.11	PPCM74	.72
5/8"	3/4" GHT	PPCF75	1.16	PPCM75	.75
3/4"	3/4" GHT	PPCF76	1.17	PPCM76	.86

* Female shipped with gasket

Parts showing package quantities sold in package quantities only.

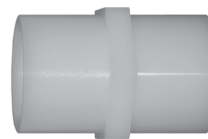
Tuff-Lite Adapters, Bushings and Couplers


NEW

Nylon

Male NPT x Female NPT Reducing Bushings

Male NPT	Female NPT	Nylon Part #	Price/Ea
3/8"	1/4"	THB32	\$.95
1/2"	1/4"	THB42	.95
1/2"	3/8"	THB43	.90
3/4"	1/2"	THB64	1.00
1"	3/4"	THB86	1.75


NEW

Nylon

Female NPT Couplers

Female NPT	Nylon Part #	Price/Ea
1/2"	TA994	\$2.40
3/4"	TA996	2.45



Nylon

Male GHT x Female NPT Adapters

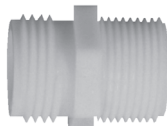
NPT	Nylon Part #	Price/Ea	Pkg Qty	Poly. Part #	Price/Ea	Pkg Qty
1/4"	TA792	\$1.18	50	PPA792~	\$1.98	50
3/8"	TA793	1.23	50	---	---	---
1/2"	TA794	1.25	50	PPA794	1.85	50
3/4"	TA796	1.27	50	PPA796~	2.10	25



Nylon

Female GHT x Male NPT Adapters

NPT	Nylon Part #	Price/Ea	Pkg Qty
1/4"	TA972	\$1.20	50
3/8"	TA973	1.23	50
1/2"	TA974	1.26	50
3/4"	TA976	1.23	50



Nylon

Male GHT x Male NPT Adapters

NPT	Nylon Part #	Price/Ea	Pkg Qty	Poly. Part #	Price/Ea	Pkg Qty
1/4"	TA772	\$.770	50	---	---	---
3/8"	TA773	.820	50	PPA773~	\$.75	50
1/2"	TA774	.900	50	PPA774	.79	50
3/4"	TA776	.925	50	PPA776	.80	50
1"	TA778	1.28	25	---	---	---



Nylon

Male NPT x Female Swivel Adapters *

NPT	Swivel	Nylon Part #	Price/Ea
1/4"	3/4" GHT	TSA72	\$1.43
3/8"	3/4" GHT	TSA73	1.43
1/4"	3/4" NPS	TSA62	1.40
3/8"	3/4" NPS	TSA63	1.43

* Shipped with gasket



Nylon

Swivel Nuts

Thread	Nylon Part #	Price/Ea
3/4" NPS	TCF6	\$.525
3/4" GHT	TCF7	.495

Parts on this page showing package quantities are sold in package quantities only.

NEW

Tuff-Lite Elbows

Female NPT x 90° Hose Barb Elbows



Nylon

Hose Size	Female NPT	Nylon Part #	Price/Ea
1/2"	1/2"	TLFS44	\$1.10
1/2"	3/4"	TLFS64	1.15
3/4"	3/4"	TLFS66	1.40

NEW

Street Elbows



Nylon

Female NPT	Male NPT	Nylon Part #	Price/Ea
1/4"	1/4"	TSE22	\$1.75
1/2"	1/2"	TSE44	2.10
3/4"	3/4"	TSE66	2.60

F

Hose x Hose Elbows



Nylon



Polypropylene

Hose Size	Nylon Part #	Price / Each	Pkg Qty
1/4"	TLSS22	\$.970	50
3/8"	TLSS33	.985	50
1/2"	TLSS44	1.11	50
3/4"	TLSS66	1.17	50

Hose Size	Polypropylene Part #	Price/Ea	Pkg Qty
1/4"	PPLSS22	\$.94	50
3/8"	PPLSS33	1.00	50
1/2"	PPLSS44	.99	50
3/4"	PPLSS66	1.32	50

GHT x Male NPT



Nylon

Male NPT	Nylon Part #	Price / Each	Pkg Qty
3/8"	TLT73	\$1.36	50
1/2"	TLT74	1.21	50
3/4"	TLT76	1.40	25

Hose Barb x Male NPT



Nylon

Hose Size	Male NPT	Nylon Part #	Price/Ea	Pkg Qty
1/4"	1/8"	TLS21	\$.675	50
	1/4"	TLS22	.745	50
	3/8"	TLS23	.097	50
3/8"	1/8"	TLS31	.710	50
	1/4"	TLS32	.745	50
	3/8"	TLS33	.097	50
	1/2"	TLS34	1.12	50
	3/4"	TLS36	1.20	50
1/2"	1/4"	TLS42	.097	50
	3/8"	TLS43	.097	50
	1/2"	TLS44	1.12	50
	3/4"	TLS46	1.20	25
	1"	TLS48	1.35	25

Hose Size	Male NPT	Nylon Part #	Price/Ea	Pkg Qty
5/8"	3/8"	TLS53	\$1.12	25
	1/2"	TLS54	1.20	25
	3/4"	TLS56	1.26	25
	1"	TLS58~	1.35	25
	3/8"	TLS63	1.35	25
3/4"	1/2"	TLS64	1.27	25
	3/4"	TLS66	1.35	25
	1"	TLS68	1.41	15
	3/4"	TLS86	1.35	15
1"	1"	TLS88	2.15	15

Parts showing package quantities sold in package quantities only.

Tuff-Lite Tees**Hose x Male NPT**

Nylon

Hose Size	Male Thread NPT	Nylon Part #	Price/Ea	Pkg Qty
1/4" x 1/4"	1/4"	TSST222	\$1.01	50
3/8" x 3/8"	3/8"	TSST333	1.11	50
1/2" x 1/2"	1/2"	TSST444	1.26	50
3/4" x 3/4"	3/4"	TSST666	1.37	25

Hose x Hose

Nylon

Hose Size	Nylon Part #	Price/Ea	Pkg Qty
1/4" x 1/4" x 1/4"	TSSS222	\$.970	50
3/8" x 3/8" x 3/8"	TSSS333	.985	50
1/2" x 1/2" x 1/2"	TSSS444	1.11	50
3/4" x 3/4" x 3/4"	TSSS666	1.17	25

Tuff-Lite Nipples, Caps and Drain Plugs**Hex Center Close Nipples**

NPT	Nylon Part #	Price / Each	Pkg Qty
1/4"	TCN202	\$.595	50
3/8"	TCN303~	.650	50
1/2"	TCN404	.740	50
3/4"	TCN606	.885	50



Nylon

Thread Caps

Thread	Size	Nylon Part #	Price / Each	Pkg Qty
NPT	1/4"	TTC2	\$.375	50
NPT	3/8"	TTC3	.450	50
NPT	1/2"	TTC4	.565	50
NPT	3/4"	TTC6	.645	50
GHT	3/4"	TTC7	.645	50



Nylon

Square Head Drain Plugs

NPT	Nylon Part #	Price / Each	Pkg Qty
1/8"	TPS1	\$.425	50
1/4"	TPS2	.450	50
3/8"	TPS3	.540	50
1/2"	TPS4	.605	50
3/4"	TPS6	.715	50
1"	TPS8	.895	50
1-1/4"	TPS10	1.33	25



Nylon

Hex Head Drain Plugs

NPT	Nylon Part #	Price / Each	Pkg Qty
1/8"	TPX1	\$.515	50
1/4"	TPX2	.540	50
3/8"	TPX3	.575	50
1/2"	TPX4	.655	50
3/4"	TPX6	.765	50
1"	TPX8	.950	50
1-1/4"	TPX10~	1.24	50



Nylon

Parts showing package quantities sold in package quantities only.

Tuff-Lite Nylon and Polypropylene Menders



Nylon

Hose Size	Nylon Part #	Price	Pkg Qty	Poly Part #	Price	Pkg Qty
1/4"	TM2	\$.515	50	PPM2	\$.47	50
5/16"	TM25	.555	50	---	---	---
3/8"	TM3	.595	50	PPM3	.48	50
1/2"	TM4	.785	50	PPM4	.63	50
5/8"	TM5	1.22	50	PPM5	.67	50
3/4"	TM6	1.22	50	PPM6	.89	50
1"	TM8	1.49	25	PPM8	1.06	50

Washers for Garden Hose Fittings



Red Vinyl



White Rubber

Description	Part #	Price	Pkg Qty
Red Vinyl	TVW7	\$.04	100
White Rubber	TRW7	.17	100

Tuff-Lite Push-On Inserts and Menders

No clamps are needed when these fittings are used with push-on hose.

Female NPT Push-On Inserts



Nylon

Hose Size	NPT	Nylon Part #	Price	Pkg Qty	Poly Part #	Price	Pkg Qty
1/4"	1/4"	TPF22	\$.815	50	PPPF22~	\$2.45	50
3/8"	1/4"	TPF32	1.00	50	---	---	---
	3/8"	TPF33	1.00	50	---	---	---
1/2"	3/8"	TPF43	.935	50	---	---	---
	1/2"	TPF44	1.05	50	PPPF44~	2.25	50

Male NPT Push-On Inserts



Nylon

Hose Size	NPT	Nylon Part #	Price	Pkg Qty
1/4"	1/8"	TPN21	\$.560	50
	1/4"	TPN22	.580	50
	3/8"	TPN23	.620	50
3/8"	1/4"	TPN32	.590	50
	3/8"	TPN33	.635	50
	1/2"	TPN34	.740	50
1/2"	3/8"	TPN43	.875	50
	1/2"	TPN44	.875	50
	3/4"	TPN46~	.875	50

Push-On Hose Menders



Nylon

Hose Size	Nylon Part #	Price	Pkg Qty
1/4"	TPM2	\$.520	50
3/8"	TPM3	.575	50
1/2"	TPM4	.690	50

Parts showing package quantities sold in package quantities only.