



MANUFACTURERS OF PRECISION-MADE
POLYURETHANE SPIRAL HOSE & TUBING



**ADVANCED
TECHNOLOGY
PRODUCTS**



TUBING

Surethane™ Polyurethane (Shore A 98)

Nylochem™ Nylon 12

Nylon 12 D.O.T.

Value-Tube™ Polyethylene LLDPE

Vinyl-Flex™ PVC

Mercury™ PTFE

Armor-Weld Spatter Resistant Tubing

Advanced Technology Products

www.atp4pneumatics.com

Phone: 937.349.4055

TAKE A LOOK AT WHAT WE OFFER NOW!

Advanced Technology Products, (ATP) has been supplying you with the highest quality polyurethane tubing available in the market for more than sixteen years. We have been expanding our product offering over the past few years and would like to introduce them to you in our new full line tubing catalog! You can now consolidate purchases with ATP and still get high quality and service that you've come to know.

ATP's tubing products are superior because we use 100% virgin materials for improved performance; never "off spec" or regrind. We take pride in our work and have added the type of products that our customers desire. After reviewing the complete product line, if you do not find what you're looking for, don't hesitate to ask us for it. Our full product capabilities list is found on page 19. We welcome your inquiries for custom materials, sizes, colors, and cut lengths. We would also welcome the opportunity to quote your "private label" and custom packaging needs.

Thank you for the opportunity to earn your business!



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ATP Private Brand Minimum Run Requirements

Tubing O.D. Min. Footage Required*,**

1/8" 30,000

5/32", 4mm 15,000

3/16" 30,000

1/4", 6mm 15,000

5/16", 8mm 10,000

3/8", 10mm 10,000

1/2", 12mm, 5,000

9/16" 2,500

5/8", 16mm 2,500

3/4" 2,500

Tubing O.D. Min. Footage Required+,**

1/8" 5,000

5/32", 4mm 7,500

3/16" 15,000

1/4", 6mm 7,500

5/16", 8mm 5,000

3/8", 10mm 5,000

1/2", 12mm 2,500

+ 15% Adder to Current Net Price

++ Maximum Six Week Lead Time

*** Same Current Net Pricing**

**** One-shipment Only**

Limited Warranty

Advanced Technology Products expressly excludes all warranties, guarantees and representations, expressed or implied, including but not limited to warranties of merchantability, material, workmanship, design and suitability for a specified or intended purpose. Products shall be free from defects in material and workmanship for a period of one (1) year after shipment. If the product purchased is defective in any way during the one (1) year period, please contact ATP for an RGA number to return the product. No unauthorized returns will be accepted. Ship product prepaid to ATP for a full evaluation. If the product is found to be defective, ATP will repair or replace the product at no charge to the customer at ATP's sole discretion.

Surethane™ Polyurethane (Shore A 98)

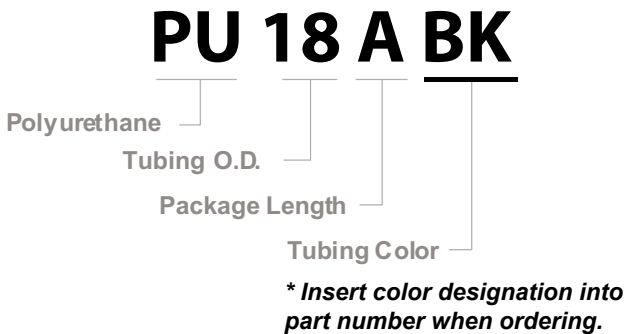
ATP



ATP Surethane™ polyurethane (PUR) Shore A 98 tubing is made from the highest quality raw materials available. It is ether-based to provide excellent hydrolysis, oil and cold resistance. Surethane™ is strong and flexible and offers superior kink resistance compared to other tubing. It is 5 to 10 times more wear resistant and lighter in weight than any rubber hose.

ATP Surethane™ tubing has an outside diameter made to extremely tight tolerances. It is ideal for use with push-to-connect fittings, as well as barb-type and compression fittings for simple installation.

Part Numbering System



Package Lengths

- A = 100'
- B = 250'
- C = 500'
- D = 1000'
- E = 25 Meters
- F = 100 Meters

Colors Available

- | | |
|---------------------------|---------------------------|
| BK = Black | HG = Hunter Green* |
| C = Clear | LB = Light Blue |
| CB = Clear Blue | LG = Light Green |
| CG = Clear Green | NB = Navy Blue |
| CR = Clear Red* | OR = Orange* |
| CY = Clear Yellow* | R = Red |
| G = Green | Y = Yellow |
| GY = Gray* | W = White |

* Non-standard colors, please check for availability before ordering.

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Features

- Strong
- Lightweight
- Flexible
- Abrasion Resistant
- Heat & Cold Resistant
- Chemical Resistant
- Meets NSF Requirement
- Kink Resistance

Specifications

- Temperature Range:
-40°F To +160°F
- Hardness: Shore A 98
- Vacuum Rating:
To 28" Hg
- Tolerances:
1/8" - 1/2" +/- .005
9/16" - 3/4" +/- .006

Applications

- Pneumatic Tools
- Pneumatic Piping
- Vacuum Laboratories
- Robotics
- Motion Control
- Instrumentation
- Agriculture
- Ship Piping
- Chemical Plant
- Lubrication Systems
- Painting Systems

Fractional Sizes

Size	Part number	O.D. (IN)	I.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
1/8"	PU18A_	.125	.062	.031	.200	240	720	100'	.50
	PU18B_	.125	.062	.031	.200	240	720	250'	1.25
	PU18C_	.125	.062	.031	.200	240	720	500'	2.50
	PU18D_	.125	.062	.031	.200	240	720	1000'	5.00
	PU18E_	.125	.062	.031	.200	240	720	25M	.41
	PU18F_	.125	.062	.031	.200	240	720	100M	1.64
5/32"	PU532A_	.156	.093	.031	.250	200	600	100'	.70
	PU532B_	.156	.093	.031	.250	200	600	250'	1.75
	PU532C_	.156	.093	.031	.250	200	600	500'	3.50
	PU532D_	.156	.093	.031	.250	200	600	1000'	7.00
	PU532E_	.156	.093	.031	.250	200	600	25M	.57
	PU532F_	.156	.093	.031	.250	200	600	100M	2.30
3/16"	PU316A_	.187	.125	.031	.339	150	450	100'	1.01
	PU316B_	.187	.125	.031	.339	150	450	250'	2.53
	PU316C_	.187	.125	.031	.339	150	450	500'	5.05
	PU316D_	.187	.125	.031	.339	150	450	1000'	10.10
	PU316E_	.187	.125	.031	.339	150	450	25M	.82
	PU316F_	.187	.125	.031	.339	150	450	100M	3.31
1/4"	PU14A_	.250	.156	.047	.476	180	540	100'	1.50
	PU14B_	.250	.156	.047	.476	180	540	250'	3.75
	PU14C_	.250	.156	.047	.476	180	540	500'	7.50
	PU14D_	.250	.156	.047	.476	180	540	1000'	15.00
	PU14E_	.250	.156	.047	.476	180	540	25M	1.23
	PU14F_	.250	.156	.047	.476	180	540	100M	4.92

_ Insert color designation into part number when ordering.

Additional Surethane™ fractional sizes continue on page 6.

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Fractional Sizes (continue)

Size	Part number	O.D. (IN)	I.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
5/16"	PU516A_	.312	.187	.063	.594	175	525	100'	2.60
	PU516B_	.312	.187	.063	.594	175	525	250'	6.50
	PU516C_	.312	.187	.063	.594	175	525	500'	13.00
	PU516E_	.312	.187	.063	.594	175	525	25M	2.13
	PU516F_	.312	.187	.063	.594	175	525	100M	8.53
3/8"	PU38A_	.375	.250	.063	1.000	150	450	100'	3.40
	PU38B_	.375	.250	.063	1.000	150	450	250'	8.50
	PU38C_	.375	.250	.063	1.000	150	450	500'	17.00
	PU38E_	.375	.250	.063	1.000	150	450	25M	2.79
	PU38F_	.375	.250	.063	1.000	150	450	100M	11.15
1/2"	PU12A_	.500	.328	.086	1.102	150	450	100'	5.10
	PU12B_	.500	.328	.086	1.102	150	450	250'	12.75
	PU12E_	.500	.328	.086	1.102	150	450	25M	4.18
9/16"	PU916A_	.562	.375	.093	1.142	140	420	100'	7.50
	PU916B_	.562	.375	.093	1.142	140	420	250'	18.75
	PU916E_	.562	.375	.093	1.142	140	420	25M	6.15
5/8"	PU58A_	.625	.406	.109	1.375	150	450	100'	9.50
	PU58B_	.625	.406	.109	1.375	150	450	250'	23.75
	PU58E_	.625	.406	.109	1.375	150	450	25M	7.79
3/4"	PU34A_	.750	.500	.125	1.500	140	420	100'	14.90
	PU34B_	.750	.500	.125	1.500	140	420	250'	37.25
	PU34E_	.750	.500	.125	1.500	140	420	25M	12.22

_ Insert color designation into part number when ordering.

Surethane™ Metric sizes continue on page 7.

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Metric Sizes

Size	Part number	O.D. (mm)	I.D. (mm)	Wall Thickness (mm)	Bend Radius (mm)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
4mm	PU04A_	4.0	2.5	0.750	6	200	720	100'	.70
	PU04B_	4.0	2.5	0.750	6	200	720	250'	1.75
	PU04C_	4.0	2.5	0.750	6	200	720	500'	3.50
	PU04D_	4.0	2.5	0.750	6	200	720	1000'	7.0
	PU04E_	4.0	2.5	0.750	6	200	720	25M	.57
	PU04F_	4.0	2.5	0.750	6	200	720	100M	2.29
6mm	PU06A_	6.0	4.0	1.000	12	180	600	100'	1.30
	PU06B_	6.0	4.0	1.000	12	180	600	250'	3.24
	PU06C_	6.0	4.0	1.000	12	180	600	500'	6.48
	PU06D_	6.0	4.0	1.000	12	180	600	1000'	13.00
	PU06E_	6.0	4.0	1.000	12	180	600	25M	1.07
	PU06F_	6.0	4.0	1.000	12	180	600	100M	4.28
8mm	PU08A_	8.0	5.0	1.500	15	175	450	100'	2.60
	PU08B_	8.0	5.0	1.500	15	175	450	250'	6.49
	PU08C_	8.0	5.0	1.500	15	175	450	500'	13.00
	PU08D_	8.0	5.0	1.500	15	175	450	1000'	26.00
	PU08E_	8.0	5.0	1.500	15	175	450	25M	2.15
	PU08F_	8.0	5.0	1.500	15	175	450	100M	8.50
10mm	PU10A_	10.0	6.5	1.750	25	150	540	100'	3.90
	PU10B_	10.0	6.5	1.750	25	150	540	250'	9.75
	PU10C_	10.0	6.5	1.750	25	150	540	500'	19.50
	PU10D_	10.0	6.5	1.750	25	150	540	1000'	39.00
	PU10E_	10.0	6.5	1.750	25	150	540	25M	3.23
	PU10F_	10.0	6.5	1.750	25	150	540	100M	12.76
12mm	PU12A_	12.0	8.0	2.000	28	150	525	100'	5.30
	PU12B_	12.0	8.0	2.000	28	150	525	250'	13.25
	PU12C_	12.0	8.0	2.000	28	150	525	500'	26.50
	PU12E_	12.0	8.0	2.000	28	150	525	25M	4.39
	PU12F_	12.0	8.0	2.000	28	150	525	100M	17.34
16mm	PU16A_	16.0	11.0	2.500	30	150	450	100'	9.5
	PU16B_	16.0	11.0	2.500	30	150	450	250'	23.75
	PU16C_	16.0	11.0	2.500	30	150	450	500'	47.50
	PU16E_	16.0	11.0	2.500	30	150	450	25M	7.79

_ Insert color designation into part number when ordering.

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Nylochem™ Nylon 12 Tubing

ATP

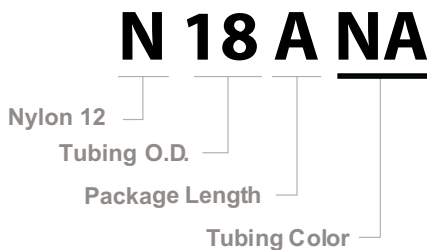


Nylochem™ Nylon tubing is recognized as an industry standard for applications which require higher working pressures and higher heat and/or chemical resistance than our polyurethane tubing. It is ideal for outdoor use applications because of its superior stress crack resistance. Nylochem™ is strong, lightweight and has a very low moisture absorption rate compared to other nylons. By not absorbing moisture, Nylochem™

remains more flexible, which in turn extends its service life. Nylochem™ tubing can be used with standard push-to-connect fittings and compression fittings for simple installation.

Because of its semi-rigid properties, a thinner tube wall provides higher flow rates and working pressure.

Part Numbering System



**Insert color designation into part number when ordering.*

Colors Available

BK = Black
B = Blue
G = Green
NA = Natural
OR = Orange*
R = Red
W = White
Y = Yellow

* Non-standard colors, please check for availability before ordering.

Package Lengths

A = 100'
B = 250'
C = 500'
D = 1000'
E = 25 Meters
F = 100 Meters

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Features

Strong
Lightweight
Flexible
Abrasion Resistant
Heat Resistant
Chemical Resistant

Specifications

Hardness: Rockwell 78 R
Shore D 70

Temperature Range:
-60°F To +200°F

Vacuum Rating:
To 28" Hg

Higher Flow Rates & Working Pressure

Tolerances:
1/8" - 1/4" +/- .004
3/4" - 1/2" +/- .006

Applications

Pneumatic Tools
Pneumatic Piping
Instrumentation
Lube Lines
Coolants
Refrigeration
Chemical Transfer
Vacuum
Process Control
Fuel Lines
Paint Supply Lines
Air Brake Lines
Laboratories

Fractional Sizes

Size	Part number	O.D. (IN)	I.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
1/8"	N18A_	.125	.080	.022	.375	420	1260	100'	.35
	N18B_	.125	.080	.022	.375	420	1260	250'	.88
	N18C_	.125	.080	.022	.375	420	1260	500'	1.75
	N18D	.125	.080	.022	.375	420	1260	1000'	3.50
5/32"	N532A_	.156	.106	.025	.500	350	1050	100'	.45
	N1532B_	.156	.106	.025	.500	350	1050	250'	1.13
	N532C_	.156	.106	.025	.500	350	1050	500'	2.25
	N532D_	.156	.106	.025	.500	350	1050	1000'	4.50
1/4"	N14A_	.250	.180	.035	1.250	290	870	100'	1.04
	N14B_	.250	.180	.035	1.250	290	870	250'	2.60
	N14C_	.250	.180	.035	1.250	290	870	500'	5.20
	N14D_	.250	.180	.035	1.250	290	870	1000'	10.40
3/8"	N38A_	.375	.275	.050	2.000	250	750	100'	2.26
	N38B_	.375	.275	.050	2.000	250	750	250'	5.65
	N38C_	.375	.275	.050	2.000	250	750	500'	11.30
	N38D_	.375	.275	.050	2.000	250	750	1000'	22.60
1/2"	N12A_	.500	.375	.062	3.50	240	720	100'	3.80
	N12B_	.500	.375	.062	3.50	240	720	250'	9.50
	N12C_	.500	.375	.062	3.50	240	720	500'	19.00

_ Insert color designation into part number when ordering.

Metric Sizes

Size	Part number	O.D. (mm)	I.D. (mm)	Wall Thickness (mm)	Bend Radius (mm)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
4mm	N04ME_	4.0	2.3	.85	12.7	350	1050	25M	.50
	N04MF_	4.0	2.3	.85	12.7	350	1050	100M	2.00
6mm	N06ME_	6.0	4.0	1.0	31.8	340	1020	25M	.90
	N06MF_	6.0	4.0	1.0	31.8	340	1020	100M	3.60
8mm	N08ME_	8.0	6.0	1.0	38	250	750	25M	1.23
	N08MF_	8.0	6.0	1.0	38	250	750	100M	4.92
10mm	N10ME_	10.0	8.0	1.0	51	225	675	25M	1.56
	N10MF_	10.0	8.0	1.0	51	225	675	100M	6.23
12mm	N12ME_	12.0	10.0	1.0	63.5	200	600	25M	1.89
	N12MF_	12.0	10.0	1.0	63.5	200	600	100M	7.55
14mm	N14ME_	14.0	12.0	2.0	100	175	525	25M	2.91
	N14MF_	14.0	12.0	2.0	100	175	525	100M	5.82

_ Insert color designation into part number when ordering.

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Nylon 12 D.O.T. Tubing

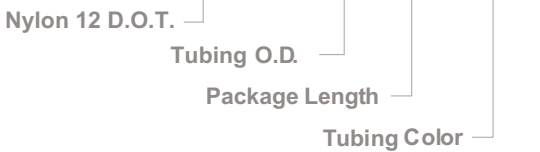
ATP



Our Nylon 12 D.O.T. Tubing is ideal for use on vehicles for instrumentation and pneumatic accessories connected to the air brake system. It also has outstanding tensile strength and chemical resistance. It meets SAEJ 844 Type "A" Specifications for use on Air Brake systems.

Part Numbering System

N12D 18 A NA



** Insert color designation into part number when ordering.*

Colors Available

B = Blue
BK = Black
G = Green
NA = Natural

R = Red
Y = Yellow
OR = Orange

Package Lengths

A = 100'
B = 250'
C = 500'
D = 1000'

Size	Part number	O.D. (IN)	I.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	Minimum Burst Pressure @ 73° F (PSI)	Package Length	Package Weight (lbs)
1/8"	N12D18A_	.125	.080	.023	.375	1000	100'	.34
	N12D18B_	.125	.080	.023	.375	1000	250'	.85
	N12D18C_	.125	.080	.023	.375	1000	500'	1.70
	N12D18D	.125	.080	.023	.375	1000	1000'	3.40
5/32"	N12D532A_	.156	.106	.025	.500	1200	100'	.57
	N12D532B_	.156	.106	.025	.500	1200	250'	1.43
	N12D532C_	.156	.106	.025	.500	1200	500'	2.85
	N12D532D_	.156	.106	.025	.500	1200	1000'	5.70
1/4"	N12D1/4A_	.250	.180	.040	1.000	1200	100'	1.21
	N12D1/4B_	.250	.180	.040	1.000	1200	250'	3.03
	N12D1/4C_	.250	.180	.040	1.000	1200	500'	6.05
	N12D1/4D_	.250	.180	.040	1.000	1200	1000'	1.21
5/16"	N12D516A_	.3125	.267	.023	1.250	1000	100'	1.57
	N12D516B_	.3125	.267	.023	1.250	1000	250'	3.93
	N12D516C_	.3125	.267	.023	1.250	1000	500'	7.85
	N12D516D_	.3125	.267	.023	1.250	1000	1000'	15.7

_ Insert color designation into part number when ordering.

Features

- Strong**
- Lightweight**
- Flexible**
- Abrasion Resistant**
- Heat Resistant**
- Chemical Resistant**
- Ten Colors Available**

Specifications

- Hardness: Rockwell 78 R**
- Shore D 70**
- Temperature Range: -40°F To +200°F**
- Vacuum Rating: To 28" Hg**
- Meets SAEJ 844 Type "A" Specifications**

Applications

- Air Brake Lines**
- Pneumatic Tools**
- Pneumatic Piping**
- Instrumentation**
- Lube Lines**
- Coolants**
- Refrigeration**
- Chemical Transfer**
- Vacuum**
- Process Control**
- Fuel Lines**
- Paint Supply Lines**

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Value-Tube™ LLDPE Tubing

ATP

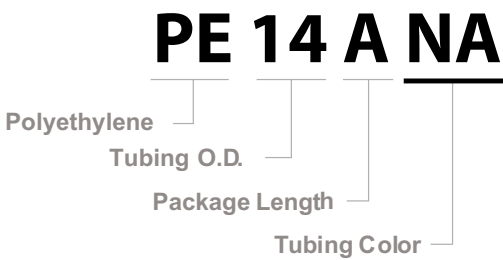


Value-Tube™ Linear Low Density Polyethylene Tubing

Value-Tube™ is made from 100% non-toxic ingredients. It's inert nature and FDA compliant status makes it perfect for food, water and beverage piping. It is ideal for use in pneumatic, drain piping, lab use and chemical transfer applications which require an inexpensive tubing.

Value-Tube™ is highly-resistant to stress cracking from chemicals, aging and ultraviolet exposure. For use with barb-type, push-to-connect or compression-style fittings.

Part Numbering System



**Insert color designation into part number when ordering.*

Colors Available

BK = Black
B = Blue
G = Green
NA = Natural
R = Red
W = White
Y = Yellow

Package Lengths

A = 100'
B = 250'
C = 500'
D = 1000'

Features

- Chemically Inert
- Chemical Resistant
- Lightweight & Flexible
- Good Dielectric Properties
- Impermeable to Gases
- Meets FDA Requirements
- Multiple Colors Available

Specifications

Temperature Range:
-50°F To +140°F

Hardness: **Shore A 93A**
Shore D 45D

Applications

- Food & Beverage
- Pneumatic Tools
- Pneumatic Piping
- Electrical Jacketing
- Drain Lines
- Instrumentation
- Chemical Transfer
- Process Control
- Laboratories

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Fractional Sizes

Size	Part number	O.D. (IN)	I.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
5/32"	PE532A_	.156	.106	.025	1.000	180	540	100'	.60
	PE532B_	.156	.106	.025	1.000	180	540	250'	1.50
	PE532C_	.156	.106	.025	1.000	180	540	500'	3.00
	PE532D_	.156	.106	.025	1.000	180	540	1000'	6.00
1/4"	PE14A_	.250	.170	.040	1.250	150	450	100'	1.20
	PE14B_	.250	.170	.040	1.250	150	450	250'	3.00
	PE14C_	.250	.170	.040	1.250	150	450	500'	6.00
	PE14D_	.250	.170	.040	1.250	150	450	1000'	12.00
3/8"	PE38A_	.375	.250	.062	2.000	150	450	100'	2.30
	PE38B_	.375	.250	.062	2.000	150	450	250'	5.75
	PE38C_	.375	.250	.062	2.000	150	450	500'	11.50
	PE38D_	.375	.250	.062	2.000	150	450	1000'	23.00
1/2"	PE12A_	.500	.375	.062	2.500	125	375	100'	3.40
	PE12B_	.500	.375	.062	2.500	125	375	250'	8.50
	PE12C_	.500	.375	.062	2.500	125	375	500'	17.00
5/8"	PE58A_	.625	.500	.062	3.000	100	300	100'	5.00
	PE58B_	.625	.500	.062	3.000	100	300	250'	12.50
	PE58C_	.625	.500	.062	3.000	100	300	500'	25.00

_ Insert color designation into part number when ordering.

Metric Sizes

Size	Part number	O.D. (mm)	I.D. (mm)	Wall Thickness (mm)	Bend Radius (mm)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
4mm	PE04MA_	4	2.5	.75	25.2	180	540	100'	.60
	PE04MB_	4	2.5	.75	25.2	180	540	250'	1.50
	PE04MC_	4	2.5	.75	25.2	180	540	500'	3.00
	PE04MD_	4	2.5	.75	25.2	180	540	1000'	6.00
6mm	PE06MA_	6	4.0	1.0	31.8	150	450	100'	1.10
	PE06MB_	6	4.0	1.0	31.8	150	450	250'	2.75
	PE06MC_	6	4.0	1.0	31.8	150	450	500'	5.50
	PE06MD_	6	4.0	1.0	31.8	150	450	1000'	11.00
8mm	PE08MA_	8	6.0	1.0	38.0	150	450	100'	1.50
	PE08MB_	8	6.0	1.0	38.0	150	450	250'	3.75
	PE08MC_	8	6.0	1.0	38.0	150	450	500'	7.50
	PE08MD_	8	6.0	1.0	38.0	150	450	1000'	15.00
10mm	PE10MA_	10	8.0	1.0	51.0	125	375	100'	2.10
	PE10MB_	10	8.0	1.0	51.0	125	375	250'	5.25
	PE10MC_	10	8.0	1.0	51.0	125	375	500'	10.50
	PE10MD_	10	8.0	1.0	51.0	125	375	1000'	21.00
12mm	PE12MA_	12	9.0	1.5	63.5	100	300	100'	2.50
	PE12MB_	12	9.0	1.5	63.5	100	300	250'	6.50
	PE12MC_	12	9.0	1.5	63.5	100	300	500'	13.00

_ Insert color designation into part number when ordering.

Vinyl-Flex™ PVC Polyvinylchloride Tubing

ATP



Vinyl-Flex™ (PVC) is suited for general, low-pressure, industrial applications for the conveyance of liquids and solids of suitable granular size. Vinyl-Flex™ is made from a PVC compound that complies with FDA regulations. Although it is primarily intended for applications where pressure is not essential, it will withstand the pressures shown.

The clear Vinyl-Flex™ Tubing provides good chemical resistance, is lightweight, flexible and economically priced.

Part Numbering System

PVC 18 14 A

Polyvinylchloride

Tubing I.D.

Tubing O.D.

Package Length

Package Lengths

A = 100'

Colors Available

Clear

Size	Part number	I.D. (IN)	O.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
1/8"	PVC18-14A	.125	.250	.062	1.250	65	195	100'	1.90
3/16"	PVC316-14A	.187	.250	.032	1.250	50	150	100'	1.10
	PVC316-516A	.187	.312	.062	1.563	55	165	100'	2.50
1/4"	PVC14-38A	.250	.375	.062	1.875	55	165	100'	3.20
	PVC14-716A	.250	.437	.093	2.187	58	174	100'	5.30
	PVC14-12A	.250	.500	.125	2.500	60	180	100'	7.70
5/16"	PVC516-716A	.312	.437	.062	2.187	50	150	100'	3.90
	PVC516-12A	.312	.500	.094	2.187	55	165	100'	6.30
	PVC516-916A	.312	.562	.125	2.750	60	180	100'	9.00
3/8"	PVC38-12A	.375	.500	.062	2.500	45	135	100'	4.50
	PVC38-916A	.375	.562	.094	2.750	50	150	100'	7.30
	PVC38-58A	.375	.625	.125	3.125	55	165	100'	10.30
7/16"	PVC716-916A	.437	.562	.062	3.125	35	105	100'	5.10
1/2"	PVC12-58A	.500	.625	.062	3.125	30	90	100'	5.80
	PVC12-1116A	.500	.688	.094	3.437	40	120	100'	9.20
	PVC12-34A	.500	.750	.125	3.750	45	135	100'	12.90
5/8"	PVC58-34A	.625	.750	.062	4.375	25	75	100'	7.20
	PVC58-1316A	.625	.812	.094	4.500	35	105	100'	11.20
	PVC58-78A	.625	.875	.125	4.375	40	120	100'	15.50
3/4"	PVC34-1A	.750	1.000	.125	5.000	35	105	100'	18.10
	PVC34-54A	.750	1.250	.250	5.500	45	120	100'	41.50
1"	PVC1-54A	1.000	1.250	.125	6.250	25	75	100'	23.30

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Features

Lightweight

Flexible

Food Grade

Clear Color

Specifications

Temperature Range:
+25°F To +150°F

Hardness:
Shore A 75 PVC

Meets FDA Requirements

NSF 51 Certified to
100°F(38°C)

USP Class VI Rated
Materials

Applications

Beverage Dispensing

Drain Tubing

Potable Water

Laboratory Tubing

Wine Transfer

Low Pressure Air Line

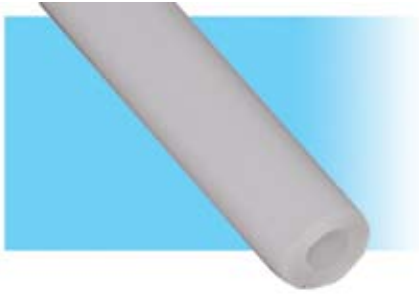
Distilled Water Transfer

Light Vacuum

Wire Harness

Mercury™ PTFE

ATP



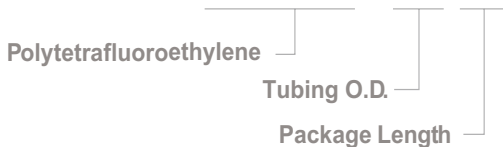
Mercury™ PTFE tubing, which is extruded with very tight tolerances, is a good choice for many advanced, extreme heat applications. It's properties allow exceptional resistance to degeneration of mechanical properties under severe conditions.

Mercury™ PTFE tubing does not support combustion and has very good dielectric properties. Mercury™ PTFE is available in tubing, and spiral profiles.

- Features**
- Chemically Inert
 - Low Extractible
 - Biocompatible - USP Class VI Approved
 - Flame Rating: UL 94 VO
 - ASTM - D3295
 - Meets FDA Requirements
 - Easy To Clean

Part Numbering System

PTFE 18 A



Package Lengths

A = 100'

Colors Available

Natural

Specifications

Temperature Range:
-454°F To +500°F

Hardness: Shore D 55

Tolerance:
1/8" +/- .004
1/4" - 3/8" +/- .005

Fractional Sizes

Size	Part number	O.D. (IN)	I.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	4:1 Burst Pressure	Package Length	Package Weight (lbs)
1/8"	PTFE18A	.125	.063	.031	.39	381	1524	100'	1.14
	PTFE14-18A	.250	.125	.063	1.18	372	1488	100'	2.29
1/4"	PTFE14-532A	.250	.156	.047	1.97	275	1100	100'	2.02
	PTFE14-316A	.250	.188	.031	2.56	174	696	100'	1.75
3/8"	PTFE38A	.375	.250	.063	4.33	240	960	100'	5.84

Metric Sizes

Size	Part number	O.D. (mm)	I.D. (mm)	Wall Thickness (mm)	Bend Radius (mm)	W.P. @ 70° F (PSI)	4:1 Burst Pressure	Package Length	Package Weight (lbs)
4mm	PTFE04MA	4.0	2.5	.75	25	292	1168	100'	1.51
6mm	PTFE06MA	6.0	4.0	1.0	40	275	1100	100'	2.29
8mm	PTFE08MA	8.0	6.0	1.0	60	138	552	100'	3.20
10mm	PTFE10MA	10.0	8.0	1.0	100	112	448	100'	4.13

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

- Applications**
- Aerospace & Aviation
 - Electronic
 - Chemical Processing
 - Automotive Medical
 - Industrial & Mechanical

Armor-Weld Spatter Resistant Tubing

ATP

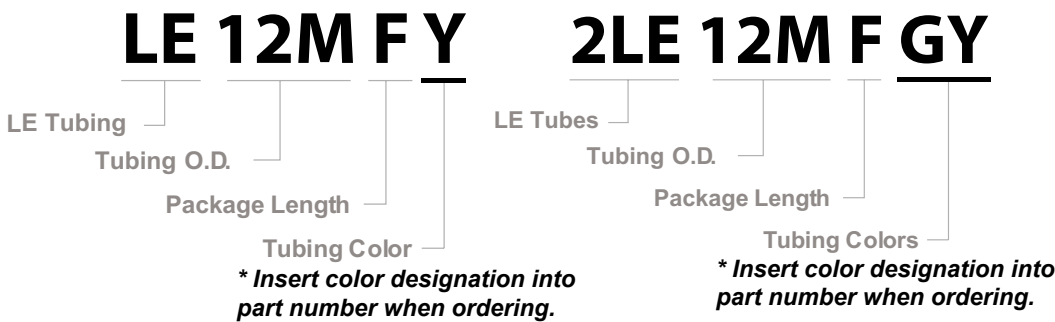


Armor-Weld Spatter Resistant, covered polyurethane weld tubing, manufactured by ATP, is specially designed for use in and around welding equipment or other severe-service applications. **Armor-Weld** is standard, ATP polyurethane tubing covered by an olefin, flame-resistant layer. Its ether-based material gives it excellent hydrolysis properties making it suitable for use in water piping, as well

as pneumatic piping and vacuum applications.

Armor-Weld tubing can be bonded together to create an ideal, color-coded solution for supply and return lines in robotic welding applications. The covering is separate from the inner tube and is easily stripped. After covering is stripped, **Armor-Weld** can be used with standard Push-To-Connect type fittings.

Part Numbering System



Package Lengths

B = 250'
F = 100 Meters

Colors Available

BK = Black
G = Green
LB = Light Blue
R = Red
W = White
Y = Yellow

Fractional Sizes

	Part number	Inner Tube O.D.	Inner Tube I.D.	Out Jacket Thickness	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
Single	LE532B_	5/32"	3/32"	.039"	.40	200	600	250'	.60
	LE14B_	1/4"	5/32"	.039"	.59	180	540	250'	.72
	LE516B_	5/16"	3/16"	.039"	.79	175	525	250'	1.10
	LE38B_	3/8"	1/4"	.039"	.98	150	450	250'	1.49
	LE12B_	1/2"	21/64"	.039"	1.17	150	450	250'	1.91
Bonded	2LE532B_	5/32"	3/32"	.039"	.40	200	600	250'	1.20
	2LE14B_	1/4"	5/32"	.039"	.59	180	540	250'	1.44
	2LE516B_	5/16"	3/16"	.039"	.79	175	525	250'	2.20
	2LE38B_	3/8"	1/4"	.039"	.98	150	450	250'	2.98
	2LE12B_	1/2"	21/64"	.039"	1.17	150	450	250'	3.82

_ Insert color designation into part number when ordering.

Features

- Flame Resistant
- Weld Spatter Resistant
- Oil Resistant
- UV Resistant
- Kink Resistant
- Abrasion Resistant
- Custom Bonding Available
- Custom Spiral Available
- Ether-Based Polyurethane
- Excellent Bend Radius

Specifications

Working Temperature:
-68°F To +140°F

Vacuum Rating:
To 28" Hg

Inside Tube:
Shore A 98

Outer Jacket Rating:
Meets UL94V0

Applications

- Robotic Welding
- Pneumatic Tools
- Pneumatic Piping
- Vacuum Laboratories
- Robotics
- Motion Control
- Instrumentation
- Agriculture
- Ship Piping
- Chemical Plant
- Lubrication System
- Painting Systems

Metric Sizes

	Part number	Inner Tube O.D.	Inner Tube I.D.	Out Jacket Thickness	Bend Radius (mm)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length (m)	Package Weight (lbs)
Single	LE04MF_	4mm	2.5mm	1mm	10	200	600	100	.60
	LE06MF_	6mm	4.0mm	1mm	15	180	540	100	.72
	LE08MF_	8mm	5.0mm	1mm	20	175	525	100	1.10
	LE10MF_	10mm	6.5mm	1mm	25	150	450	100	1.49
	LE12MF_	12mm	8.0mm	1mm	30	150	450	100	1.91
Bonded	2LE04MF_	4mm	2.5mm	1mm	10	200	600	100	1.20
	2LE06MF_	6mm	4.0mm	1mm	15	180	540	100	1.44
	2LE08MF_	8mm	5.0mm	1mm	20	175	525	100	2.20
	2LE10MF_	10mm	6.5mm	1mm	25	150	450	100	2.98
	2LE12MF_	12mm	8.0mm	1mm	30	150	450	100	3.82

_ Insert color designation into part number when ordering.

Custom

Custom sizes, colors, lengths are available with minimum quantity. See page 3 for details.

Custom Quote Form

Phone: 937.349.4055

Fax: 937.349.4155

Copy This Form & Fax it

In order for us to quote your properly, simply make a copy of this form, fill in your specifications and fax it to **937-349-4155**. A drawing will be issued for your approval before production begins. Due to the very special nature of this product, no cancellations can be accepted once production begins.

Tube	1	2	3	4
OD				
Color				

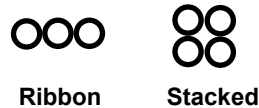
Length: Quantity:



Swivel Fitting Supplied: Yes No

Bonded Configuration: Ribbon Stacked

Bonded Examples



Contact Information

Contact _____ E-Mail _____

Company Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

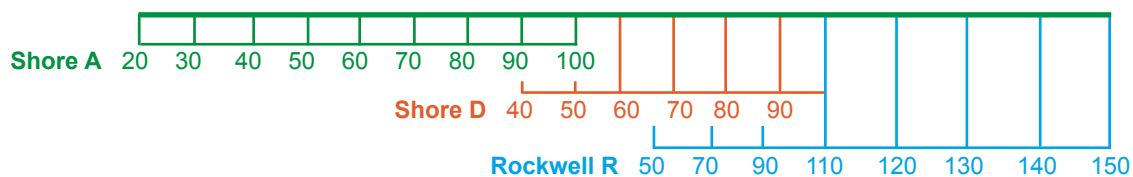
Decimal & Metric Equivalents

64ths	32nds	16ths	8ths	Decimal	MM	64ths	32nds	16ths	8ths	Decimal	MM
5/64				0.07812	1.864	33/64				0.51582	13.097
	3/32			0.09375	2.381		17/32			0.53125	13.494
7/64				0.10938	2.778	35/64				0.54688	13.891
		1/8		0.12500	3.175			9/16		0.56250	14.288
13/64				0.20312	5.195	37/64				0.57812	14.684
	7/32			0.21875	5.556		19/32			0.59375	15.081
15/64				0.23438	5.953	39/64				0.60938	15.478
		1/4		0.25000	6.350				5/8	0.62500	15.875
21/64				0.32812	8.334	45/64				0.70312	17.859
	11/32			0.34375	8.731		23/32			0.71875	18.256
23/64				0.35938	9.128	47/64				0.73438	18.653
		3/8		0.37500	9.525			3/4		0.75000	19.050
25/64				0.39062	9.922	53/64				0.82812	21.034
	13/32			0.40625	10.309		27/32			0.84375	21.431
27/64				0.42186	10.716	55/64				0.85938	21.823
		7/16		0.43750	11.113				7/8	0.87500	22.225
29/64				0.45312	11.509	61/64				0.95312	24.209
	15/32			0.46875	11.908		31/32			0.96875	24.605
31/64				0.48438	12.303	63/64				0.98438	25.003
		1/2		0.50000	12.700				1	1.00000	25.400

Measurement Conversion Table

To Convert	Into	Multiply By	To Convert	Into	Multiply By	
Centimeters	Inches	.394	Inches	Centimeters	2.54	
	Feet	.0382		Feet	.0833	
	Meters	.01		Meters	Centimeters	100
	Millimeter	10		Feet	3.281	
Feet	Centimeter	30.48	Inches	Kilometers	.001	
	Inches	12.00		Miles	.0006214	
	Meters	.3048		Millimeters	1000	
	Miles	.0001894		Yards	1.093	
	Yard	.6777				
Grams	Ounces	.035	Temperature Conversions			
	Pounds	.002	To convert Fahrenheit degrees into Celsius,			
	Kilogram	.001	<i>subtract 32, multiply by 5, and divide by 9.</i>			
			To convert Celsius into Fahrenheit,			
			<i>multiply by 9, divide by 5, and add 32.</i>			

Hardness Comparison



Chemical Resistance

	Polyurethane	Nylon12	Polyethylene	PVC	PTFE	Weld Tubing Cover
Acids						
Acetic, 3n	B	E	A	A	A	A
Boric, 4%	B	A	A	A	A	A
Chromic, 3n	D	E	A	A	A	—
Citronic, 3n	B	—	A	A	A	—
Formic, 3n	D	A	A	A	A	A
HC1, 3n	A	E	A	A	A	—
Lactic, 3n	C	B	A	A	A	A
Nitric, 3n	D	E	A	A	A	B
Phosphoric, 3n	D	D	A	A	A	A
Sulfuric, <20%	A	B	A	A	A	A
Sulfuric, >20%	B	C	B	A	A	A
Alkalines						
Ammonia, 3n	A	A	—	A	A	A
Potassium Hydroxide, 3n	A	—	A	A	A	A
Sodium Hydroxide, <20%	A	A	A	A	A	A
Sodium Hydroxide, >20%	C	A	—	A	A	A
Aqueous Solution						
Aluminum Chloride, 10%	B	—	A	A	A	A
Ammonium Chloride, 10%	B	A	A	A	A	A
Bleaching Agent, 40%	A	E	—	—	A	A
Bleaching Agent, 100%	B	E	—	—	A	—
Calcium Chloride, 40%	B	A	A	—	A	—
Caustic Soda, 10%	A	A	—	—	A	—
Ferric Chloride, 10%	B	—	A	A	A	A
Hydrogen Peroxide, 3%	A	A	A	A	A	A
Magnesium Chloride, 30%	B	—	A	A	A	—
Potassium Chloride, 40%	B	A	A	—	A	—
Potassium Dichromate, 10%	B	C	A	—	A	—
Potassium Permanganate, 5%	D	D	A	—	A	—
Sea Water	A	A	A	A	A	—
Sodium Bisulfate, 10%	B	A	A	—	A	—
Sodium Chloride, 10%	B	B	A	—	A	—
Sodium Hypochlorite, PH 13	A	B	A	—	A	A
Fuels						
ASTM Fuel A	A	—	—	B	A	—
ASTM Fuel B	C	—	—	C	A	—
ASTM Fuel C	C	—	—	—	A	—
Diesel Fuel	B	A	—	B	A	D
Gasohol (10-15% Methanol)	D	—	—	—	A	—
High-test (Super) Gasoline	D	A	—	—	A	—
Kerosene	A	V	—	B	A	D
Oils						
ASTM Oil #1	A	—	—	B	A	—
ASTM Oil #2	A	—	—	—	A	—
ASTM Oil #3	A	—	—	B	A	—
Brake Fluid (ATE or ATS)	D	A	—	—	A	—
Gear Box Oil (SAE 90)	A	—	—	—	A	—
Hydraulic Fluid	B	—	—	—	A	—
Hydraulic/Water Emulsion	B	—	—	—	A	—
Mineral Oil	A	A	C	A	A	—
Motor Oil	A	A	B	—	A	—
Paraffin Oil	A	A	—	A	A	—
Power Steering Fluid	B	—	—	—	A	—
Skydrol® 500 Oil	D	—	—	—	A	B

	Polyurethane	Nylon12	Polyethylene	PVC	PTFE	Weld Tubing Cover
Greases						
Calcium Grease	A	—	—	—	A	—
Sodium Grease	A	—	—	—	A	—
Teflon® Grease	A	—	—	—	A	—
Miscellaneous						
Diocetyl Phthalate (DOP)	A	—	C	C	A	—
Ethylene Chloride	B	C	D	—	A	D
Ethylene Glycol/Water 50/50	B	—	—	A	A	A
Household Cleaner	B	—	—	—	A	—
Naptha	A	—	A	B	A	D
Silage (Silo) Juice	B	—	—	—	A	—
Natural Perspiration	A	—	—	—	A	—
Tincture of Iodine	D	—	—	—	A	—
Tricresyl Phosphate	D	—	—	C	A	—
Solvents						
Acetone	D	A	D	C	A	B
Aniline	D	B	B	B	A	—
Benzene	D	A	D	C	A	D
Benzyl Alcohol	E	—	—	—	A	B
Butane	B	A	—	—	A	B
Butyl Acetate	D	A	B	C	A	—
Butyl Alcohol	D	A	A	—	A	—
Carbon Tetrachloride	D	A	D	C	A	D
Chlorobenzene	D	C	D	C	A	D
Chloroform	D	C	D	C	A	D
Cyclohexane	C	A	—	A	A	D
Ethanol	C	—	B	—	A	B
Ether	C	A	—	—	A	B
Ethyl Acetate	D	A	C	C	A	A
Freon 11, 12, 22	C	—	—	—	A	D
Glycerine & Glycol	A	A	B	A	A	A
Heptane	B	A	D	B	A	—
Hexane	B	A	—	B	A	—
Isopropyl Alcohol	C	A	—	—	A	—
Methanol	C	—	B	—	A	A
Methyl Acetate	D	—	—	C	A	—
Methyl Ethyl Ketone	C	A	—	C	A	—
Methyl Glycol	D	—	—	—	A	—
Methylene Chloride	D	E	D	C	A	—
N-Methyl Pyrrolidone	E	—	—	—	A	—
Perchloroethylene	D	—	—	C	A	—
Petroleum	B	A	—	—	A	—
Pyridine	E	A	—	—	A	B
Tetrachloroethylene	D	—	—	C	A	—
Tetrahydrofuran	D	B	D	C	A	B
Toluene	D	A	D	C	A	D
Trichloroethylene	D	C	D	C	A	D
Turpentine (Pine Oil)	B	A	C	B	A	B
Xylene	D	A	—	C	A	D

Teflon® is a registered trademark of the Dupont Corporation.
 Skydrol® is a registered trademark of Monsanto Company.

- A Excellent (0-3%)
- B Good (4-15%)
- C Fair (16-30%)
- D Poor (>30%)
- E Dissolves

WARNING:
 This table is a general guide based on our testing. Although every effort was made to ensure its accuracy, we cannot guarantee your results due to variables in temperature and application. Therefore, no warranty is expressed or implied, and the user assumes all risk and liability.



At ATP, we have developed the latest technology in tubing, hoses and pneumatic accessories. In keeping with current market demands, our products offer ergonomics and safety advancements to help support assembly and automation applications.



Spiral Hoses

Techniblue™, Technithane™ and our industry exclusives— the “Strong™” and “Strong-Plus™.” A tighter coil ID gives our Strong hoses better memory retention. The “Plus” is a lightweight, ergonomic, hose whip providing surface protection and operator comfort. Custom models are our specialty.



Technifit™ Push-To-Connect Fitting

All are made to extremely tight tolerances and work with ATP tubing to eliminate leaks. Our variety of fittings represents a large selection of the most common models, sizes and materials. Additional models and sizes - including stainless materials and Viton® seals are available as special order.



Technibond®

Thermally-bonded, polyurethane tube groupings available in straight and spiral configurations. Wire can be added to carry electric. Custom configurations welcome with no minimum quantities.



ARMOR-AIR™ Contractors Air Hose

Lightweight, flexible and much more abrasion-resistant than traditional rubber air hoses. A must-have for contractors, and anyone who owns an air compressor. Available with varying hardness and many colors. Reinforced with nylon for greater working pressures. Standard & custom assemblies and spirals.



Free Angle® Swivel Fitting.

The rubber boot has been replaced by an exclusive steel cover giving it a much longer service life. Our two rotation points make this superior to the imitators. The ergonomic, patented 360° circular rotation and 45° angled rotation makes this fitting indispensable for air tool and assembly applications.



Hose & Cable Balancers

Durable cases and high-quality internal components make up our balancers. Ideal for workstation ergonomics.



Oetiker® Clamps

The Oetiker® Clamp creates a spring effect when the hose material expands or contracts in response to thermal or mechanical influences such as temperature, vibration, etc. Single ear, double ear and stepless in both carbon steel and stainless steel.



Brass Fittings

ATP offers a full line of brass fittings to meet your connection needs. We offer hose fittings, hose barbs, pipe fittings, and mufflers in both fractional and metric sizes. Available in NPT or BSPT.



Oetiker® Swing Couplers

ATP carries and recommends Oetiker® Swing Couplings. The coupling design allows a full flow with safety vent feature. Use Oetiker® Swing Couplings with ATP Free Angle Swivel Fittings. The ultimate pairing where safety and ergonomics are concerned.



TechniGripp®

The world's first hydraulic push-to-connect fitting. Does not require use of a crimper to make medium pressure hydraulic hose lines. Allows on-site fabrication to eliminate costly down time. Compatible with SAE100R7 hose specifications.



MANUFACTURERS OF PRECISION-MADE
POLYURETHANE SPIRAL HOSE & TUBING



**ADVANCED
TECHNOLOGY
PRODUCTS**



CAT. 03-07

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