

TUBING PROGRAM





“Our team work together,
towards this on common
goal: there is nothing we
have done yesterday
that cannot be improve
today.”

Metal Work was set up in 1967 for the production of push-in fittings for compressed air systems. The company gradually extended its production and sales structure to become a leader in pneumatic systems for automation. Now the production unit in Concesio has a staff of about 400, while the national and international sales organisation staff number around 450. In 1992 **Metal Work** has obtained the ISO 9001 certification.

To the quality management one, in 2000 we have add the one related to the enviromental management according the ISO 14001. To these **Metal Work** Sp.A. applied the OHSAS 18001 standard in 2007 to guarantee a Management System of Occupational Safety and Health. All the certifications above mentioned have been released by the German certification body DEKRA ITS, accredited by TGA Products are distributed through 38 branches in Italy and abroad, which offer an efficient capillary before - and after-sales service. The product quality and an efficient sales organisation are the basis on which **Metal Work** firmly stands and enable the company to meet all possible requirements in pneumatic systems for automation.



TAKE A LOOK AT WHAT WE OFFER NOW!

Metal Work Pneumatic Products, (MWP) 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 MWP and still get the high quality and service that you've come to know.

MWP'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 the back page of this catalog. 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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NSF[®] is a registered trademark of the NATIONAL SANITATION FOUNDATION

MWP Private Brand PU 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
* Same Current Net Pricing	
** One-shipment Only	

Tubing O.D.	Min. Footage Required*,**
1/8"	15,000
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	

MWP Private Brand NYLON & PE Minimum Run Requirements

Tubing O.D.	Min. Footage Required*,**
1/8"	50,000
5/32", 4mm	50,000
3/16"	50,000
1/4", 6mm	50,000
5/16", 8mm	40,000
3/8", 10mm	25,000
1/2", 12mm	14,000
9/16"	2,500
5/8", 16mm	2,500
3/4"	2,500
* 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,

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.

NSF 51[®] Polyurethane (Shore A 98)



MWP™ NSF 51[®] 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.

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

Package Lengths

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

Part Numbering System

MWPU 18 A BK

Polyurethane Tubing O.D. Package Length Tubing color
 Insert color designation part number when

- Strong
- Lightweight
- Flexible
- Abrasion Resistant
- Heat & Cold Resistant
- Chemical Resistant
- Kink Resistant
- NSF 51[®] Certified

SPECIFICATIONS

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

Stock Color Chart: • = Stock, x = Non Stock

PU	BK	(CB	CG	CR	G	GY	LB	LG	NB	OR	R	Y	W
1/8	•	•	x	x	•	x	•	x	•	x	•	•	•	•
04M/5/32	•	•	x	•	•	•	•	x	•	•	•	•	•	•
3/16	•	•	x	x	x	x	x	x	x	x	•	•	•	•
1/4	•	•	x	•	•	•	•	x	•	•	•	•	•	•
08M/5/16	•	•	x	x	•	•	•	x	•	•	•	•	•	•
3/8	•	•	x	•	•	•	•	x	•	•	•	•	•	•
1/2	•	•	x	•	•	•	•	•	•	x	•	•	•	•
9/16	•	•	x	x	x	x	x	x	x	x	x	x	x	x
5/8	•	•	x	x	x	x	x	x	x	x	x	x	x	x
3/4	•	•	x	x	•	x	x	x	•	x	•	•	•	•
6MM	•	•	x	x	•	•	•	x	•	•	•	•	•	•
10MM	•	•	x	x	•	x	•	x	•	x	•	•	•	•
12MM	•	•	x	x	•	x	•	x	•	x	•	•	•	•
16MM	•	•	x	x	•	x	•	x	•	x	•	•	•	•

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

Applications

- Pneumatic Tools
- Pneumatic Piping
- Vacuum
- Laboratories
- Robotics
- Motion Control
- Instrumentation
- Agriculture
- Lube Lines
- Painting Systems
- Food & Beverage

* color green, clear green, yellow, clear yellow Temperature Range: -40°F To +150°F

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

Click on the part number to add the item to the shopping cart.



™ NSF 51® Polyurethane (Shore A 98)

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
4mm 5/32"	PU04M/532A	4mm,5/32	.093	.031	.250	200	600	100'	.70
	PU04M/532B	4mm,5/32	.093	.031	.250	200	600	250'	1.75
	PU04M/532C	4mm,5/32	.093	.031	.250	200	600	500'	3.50
	PU04M/532D	4mm,5/32	.093	.031	.250	200	600	1000'	7.00
	PU04M/532E	4mm,5/32	.093	.031	.250	200	600	25M	.57
	PU04M/532F	4mm,5/32	.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
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
8mm 5/16"	PU08M/516A	8mm,5/16	.187	.063	.594	175	525	100'	2.60
	PU08M/516B	8mm,5/16	.187	.063	.594	175	525	250'	6.50
	PU08M/516C	8mm,5/16	.187	.063	.594	175	525	500'	13.00
	PU08M/516D	8mm,5/16	.187	.063	.594	175	525	1000'	26.00
	PU08M/516E	8mm,5/16	.187	.063	.594	175	525	25M	2.13
	PU08M/516F	8mm,5/16	.187	.063	.594	175	525	100M	8.53
3/8"	PU38A	.375	.250	.063	1.00	150	450	100'	3.40
	PU38B	.375	.250	.063	1.00	150	450	250'	8.50
	PU38C	.375	.250	.063	1.00	150	450	500'	17.00
	PU38D	.375	.250	.063	1.00	150	450	1000'	34.00
1/2"	PU12A	.500	.328	.086	1.102	150	450	100'	5.60
	PU12B	.500	.328	.086	1.102	150	450	250'	14.90
	PU12C	.500	.328	.086	1.102	150	450	500'	28.05
9/16"	PU916A	.562	.375	.093	1.142	140	420	100'	7.50
	PU916B	.562	.375	.093	1.142	140	420	250'	18.75
5/8"	PU58A	.625	.406	.109	1.375	150	450	100'	9.50
	PU58B	.625	.406	.109	1.375	150	450	250'	23.75
3/4"	PU34A	.750	.500	.125	1.500	140	420	100'	14.90
	PU34B	.750	.500	.125	1.500	140	420	250'	37.25

Polyurethane Metric on page 6

Click on the part number to add the item to the shopping cart.



NSF 51[®] Polyurethane (Shore A 98)

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)
6mm	PU06MA_	6.0	4.0	1.000	12	180	540	100'	1.30
	PU06MB_	6.0	4.0	1.000	12	180	540	250'	3.24
	PU06MC_	6.0	4.0	1.000	12	180	540	500'	6.48
	PU06MD_	6.0	4.0	1.000	12	180	540	1000'	13.00
	PU06ME_	6.0	4.0	1.000	12	180	540	25M	1.07
	PU06MF_	6.0	4.0	1.000	12	180	540	100M	4.28
10mm	PU10MA_	10.0	6.5	1.750	25	150	450	100'	3.90
	PU10MB_	10.0	6.5	1.750	25	150	450	250'	9.75
	PU10MC_	10.0	6.5	1.750	25	150	450	500'	19.50
	PU10ME_	10.0	6.5	1.750	25	150	450	25M	3.23
	PU10MF_	10.0	6.5	1.750	25	150	450	100M	12.76
12mm	PU12MA_	12.0	8.0	2.000	28	150	450	100'	5.30
	PU12MB_	12.0	8.0	2.000	28	150	450	250'	13.25
	PU12MC_	12.0	8.0	2.000	28	150	450	500'	26.50
	PU12ME_	12.0	8.0	2.000	28	150	450	25M	4.39
	PU12MF_	12.0	8.0	2.000	28	150	450	100M	17.34
16mm	PU16MA_	16.0	11.0	2.500	30	150	450	100'	9.5
	PU16MB_	16.0	11.0	2.500	30	150	450	250'	23.75
	PU16ME_	16.0	11.0	2.500	30	150	450	25M	7.79
	PU16MF_	16.0	11.0	2.500	30	150	450	100M	31.16

_ Insert color designation into part number when ordering.

* 4mm O.D. & 8mm O.D. found on page 5

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

Nylon 12 Tubing



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.

NYLON is strong, lightweight and has a very low moisture absorption rate compared to other nylons. By not absorbing moisture, **NYLON** remains more flexible, which in turn

extends it's service life. **NYLON™** tubing can be used with **Technifit™** push-to-connect fittings and compression fittings for simple installation.

Because of it's semi-rigid properties, Nylon tubing offers a thinner tube wall providing higher flow rates and working pressure.

Be sure to check out our new Nylon High Pressure Tube offering on page 8!

Package Lengths

- A = 100'
- B = 250' (Non-Stock) C = 500'
- D = 1000'
- E = 25 Meters
- F = 100 Meters

Part Numbering System

MWN 18 A NA

Nylon 12
Tubing O.D.
Package Length
Tubing color
Insert color designation
part number when

Stock Color Chart: • = Stock, x = Non Stock

N	BK	B	G	GY	NA	OR	R	S	Y
1/8	•	•	x	x	•	x	•	x	•
5/32	•	•	•	x	•	•	•	x	•
1/4 x .150	•	x	x	x	x	x	x	•	x
1/4	•	•	•	x	•	•	•	x	•
3/8 x .215	•	x	x	x	x	x	x	•	x
3/8	•	•	•	x	•	•	•	x	•
1/2	•	•	•	x	•	•	•	x	•
4mm	•	•	•	x	•	•	•	x	•
6mm	•	•	•	•	•	•	•	x	•
8mm	•	•	•	•	•	•	•	x	•
10mm	•	•	•	x	•	•	•	x	•
12mm	•	•	•	x	•	•	•	x	•
14mm	•	•	x	x	•	x	x	x	x

BK = Black B = Blue G = Green GY=Gray
NA = Natural OR = Orange R = Red S = Silver Y = Yellow

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" O.D. +/- .005
3/8" - 1/2" O.D. +/- .006

Applications

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

Click on the part number to add the item to the shopping cart.



Nylon 12 Tubing

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
4MM 5/32"	N04M/532A	4mm/.156	.106	.025	.500	350	1050	100'	.45
	N4M/532B_*	4mm/.156	.106	.025	.500	350	1050	250'	1.13
	N4M/532C	4mm/.156	.106	.025	.500	350	1050	500'	2.25
	N4M/532D	4mm/.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
High Pressure 1/4"	N14x.150A	.250	.150	.050	.75	800	2400	100'	1.40
	N14x.150C	.250	.150	.050	.75	800	2400	500'	6.80
High Pressure 3/8"	N38x.215A	.375	.215	.082	1.00	883	2650	100'	3.20
	N38x.215C	.375	.215	.082	1.00	883	2650	500'	16.0
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. * = Non Stock Packaged Length

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)
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	11.0	1.5	100	175	525	25M	2.91
	N14MF	14.0	11.0	1.5	100	175	525	100M	11.64

_ Insert color designation into part number when ordering.

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

Click on the part number to add the item to the shopping cart.

D.O.T Air Brake Tubing



Our **Nylon 12 D.O.T. Air Brake 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.

Package Lengths

- A = 100'
- B = 250' (Non-Stock)
- C = 500'
- D = 1000'

Stock Color Chart:

• = Stock, x = Non Stock

N 12	BK	NA
1/8	•	•
5/32	•	•
1/4	•	•
5/16	•	•

BK = Black NA = Natural

Part number	O.D. (IN)	I.D. (IN)	Wall Thickness (IN)	Bend Radius (IN)	Minimum Burst Pressure @ 73° F (PSI)	Package Length	Package (lbs)
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
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
N12D1/4A_	.250	.170	.040	1.000	1200	100'	1.21
N12D1/4B_*	.250	.170	.040	1.000	1200	250'	3.03
N12D1/4C_	.250	.170	.040	1.000	1200	500'	6.05
N12D1/4D_	.250	.170	.040	1.000	1200	1000'	1.21
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.

* = Non Stock Packaged Length

Part Numbering System

MWN12D 18 A NA

Nylon D.O.T.
Tubing O.D.
Package Length
Tubing Color
Insert color designation
part number when

- Strong
- Lightweight
- Flexible
- Abrasion Resistant
- Heat Resistant
- Chemical Resistant

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

Value-Tube™ LLDPE Tubing



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 and beverage piping not requiring NSF certification. 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, ageing and ultraviolet exposure. For use with barb-type, **Technifit™** push-to-connect or compression-style fittings.

Package Lengths

- A = 100'
- B = 250' (Non-Stock)
- C = 500'
- D = 1000'

Part Numbering System

MWPE 14 A NA

Polyethylene
Tubing O.D.
Package Length
Tubing color
Insert color designation
part number when

Stock Color Chart: • = Stock, x = Non Stock

PE	BK	B	G	NA	P	R	Y
4mm/ 5/32	•	•	•	•	x	•	•
1/4	•	•	•	•	x	•	•
3/8	•	•	•	•	x	•	•
1/2	•	•	•	•	x	•	•
5/8	•	•	•	•	x	•	•
3/4	x	x	x	•	x	x	x
1	x	x	x	•	x	x	x
6mm	•	•	x	•	x	x	x
8mm/ 5/16	•	•	•	•	x	x	•
10mm	•	•	x	•	x	x	x
12mm	•	•	x	•	x	x	x

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

Features

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

Specifications

- Temperature Range:
-50°F To +140°F
- Hardness: Shore A 98A
Shore D 55D
- Vacuum Rating: To 28" Hg
- Tolerances:
1/8" - 1/4" O.D. +/- .004
3/8" - 1/2" O.D. +/- .006

Applications

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

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

Value-Tube™ LLDPE Tubing

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 (lbs)
4MM 5/32"	PE04M/532A	4mm,5/32	.106	.025	1.000	180	540	100'	.60
	PE04M/532B *	4mm,5/32	.106	.025	1.000	180	540	250'	1.50
	PE04M/532C	4mm,5/32	.106	.025	1.000	180	540	500'	3.00
	PE04M/532D	4mm,5/32	.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
1/4x1/8"	PE1418A	.250	.125	.0625	1.000	350	1050	100'	1.40
	PE1418B *	.250	.125	.0625	1.000	350	1050	250'	3.50
	PE1418C	.250	.125	.0625	1.000	350	1050	500'	7.00
	PE1418D	.250	.125	.0625	1.000	350	1050	1000'	14.00
8MM 5/16"	PE08M/516A	8mm,5/16	.236	.038	1.500	150	450	100'	1.50
	PE08M/516B*	8mm,5/16	.236	.038	1.500	150	450	250'	3.75
	PE08M/516C	8mm,5/16	.236	.038	1.500	150	450	500'	7.50
	PE08M/516D	8mm,5/16	.236	.038	1.500	150	450	1000'	15.00
3/8"	PE38A	.375	.250	.0625	2.000	150	450	100'	2.30
	PE38B *	.375	.250	.0625	2.000	150	450	250'	5.75
	PE38C	.375	.250	.0625	2.000	150	450	500'	11.50
	PE38D	.375	.250	.0625	2.000	150	450	1000'	23.00
1/2"	PE12A	.500	.375	.0625	2.500	125	375	100'	3.40
	PE12B *	.500	.375	.0625	2.500	125	375	250'	8.50
	PE12C	.500	.375	.0625	2.500	125	375	500'	17.00
5/8"	PE58A	.625	.500	.0625	3.000	100	300	100'	5.00
	PE58B *	.625	.500	.0625	3.000	100	300	250'	12.50
	PE58C	.625	.500	.0625	3.000	100	300	500'	25.00
3/4"	PE34A	.750	.625	.0625	4.000	100	300	100'	5.50
1"	PE1A	1.0	.750	.125	4.000	150	225	100'	13.70

_ Insert color designation into part number when ordering. * = Non Stock Packaged Length

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 (lbs)
6mm	PE06MA	6.0	4.0	1.0	31.8	150	450	100'	1.10
	PE06MB *	6.0	4.0	1.0	31.8	150	450	250'	2.75
	PE06MC	6.0	4.0	1.0	31.8	150	450	500'	5.50
	PE06MD	6.0	4.0	1.0	31.8	150	450	1000'	11.00
10mm	PE10MA	10.0	8.0	1.0	51.0	125	375	100'	2.10
	PE10MB *	10.0	8.0	1.0	51.0	125	375	250'	5.25
	PE10MC	10.0	8.0	1.0	51.0	125	375	500'	10.50
	PE10MD	10.0	8.0	1.0	51.0	125	375	1000'	21.00
12mm	PE12MA	12.0	9.0	1.5	63.5	100	300	100'	2.50
	PE12MB *	12.0	9.0	1.5	63.5	100	300	250'	6.50
	PE12MC	12.0	9.0	1.5	63.5	100	300	500'	13.00

_ Insert color designation into part number when ordering. * = Non Stock Packaged Length

NSF-61[®] LLDPE Tubing



IMBIBE™ exceeds FDA expectations with its NSF-61 Certification for drinking water applications. Manufactured from 100% non-toxic ingredients, Imbibe is perfect for drinking water, beverage and food applications. With a complete range of sizes, colors and packaged lengths, **IMBIBE™** is the perfect one stop shop tubing option. Include NSF-61 Certified Flowfit Push-to-Connect fittings and complete your assembly needs.

Package Lengths

- A = 100'
- B = 250' (Non-Stock)
- C = 500'
- D = 1000'

Part Numbering System

MWDWPE 14 A NA

Polyethylene
 Tubing O.D.
 Package Length
 Tubing color
 Insert color designation
 part number when

Stock Color Chart: • = Stock, x = Non Stock

DWPE	BK	B	G	NA	R	W	Y
4mm/ 5/32	•	•	x	•	•	x	x
1/4	•	•	•	•	•	•	•
3/8	•	•	•	•	•	•	•
1/2	•	•	x	•	•	•	x
6mm	•	•	x	•	•	x	x
8mm/5/16	•	•	x	•	•	x	x
10mm	•	•	x	•	•	x	x
12mm	•	•	x	•	•	x	x

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

Features

- Chemically Inert
- Chemical Resistant
- Lightweight & Flexible
- Good Dielectric Properties
- Impermeable to Gases
- Meets FDA Requirements
- NSF-61[®] Certified

Specifications

- Temperature Range:
-50°F To +140°F
- Hardness: Shore A 98A
Shore D 55D
- Vacuum Rating: To 28" Hg
- Tolerances:
1/8" - 1/4" O.D. +/- .004
3/8" - 1/2" O.D. +/- .006

Applications

- Food & Beverage
- Pneumatic Tools
- Pneumatic Piping
- Electrical Jacketing
- Drain Lines
- Instrumentation
- Chemical Transfer
- Process Control
- Laboratories
- Water Purification
- Water Conditioners
- Ice Makers
- Misting systems

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

NSF-61[®] LLDPE Tubing

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 (lbs)
4MM 5/32"	DWPE04M/532A	4mm,5/32	.106	.025	1.000	180	540	100'	.60
	DWPE04M/532B_*	4mm,5/32	.106	.025	1.000	180	540	250'	1.50
	DWPE04M/532C	4mm,5/32	.106	.025	1.000	180	540	500'	3.00
	DWPE04M/532D	4mm,5/32	.106	.025	1.000	180	540	1000'	6.00
1/4"	DWPE14A	.250	.170	.040	1.250	150	450	100'	1.20
	DWPE14B_*	.250	.170	.040	1.250	150	450	250'	3.00
	DWPE14C	.250	.170	.040	1.250	150	450	500'	6.00
	DWPE14D	.250	.170	.040	1.250	150	450	1000'	12.00
8MM 5/16"	DWPE08M/5/16A	.8mm,5/16	.236	.038	1.500	150	450	100'	1.50
	DWPE08M/5/16B_*	8mm,5/16	.236	.038	1.500	150	450	250'	3.75
	DWPE08M/5/16C	8mm,5/16	.236	.038	1.500	150	450	500'	7.50
	DWPE08M/5/16D	8mm,5/16	.236	.038	1.500	150	450	1000'	15.00
3/8"	DWPE38A	.375	.250	.062	2.000	150	450	100'	2.30
	DWPE38B_*	.375	.250	.062	2.000	150	450	250'	5.75
	DWPE38C	.375	.250	.062	2.000	150	450	500'	11.50
	DWPE38D	.375	.250	.062	2.000	150	450	1000'	23.00
1/2"	DWPE12A	.500	.375	.062	2.500	125	375	100'	3.40
	DWPE12B_*	.500	.375	.062	2.500	125	375	250'	8.50
	DWPE12C	.500	.375	.062	2.500	125	375	500'	17.00

_ Insert color designation into part number when ordering. * = Non Stock Packaged Length

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 (lbs)
6mm	DWPE06MA	6.0	4.0	1.0	31.8	150	450	100'	1.10
	DWPE06MB_*	6.0	4.0	1.0	31.8	150	450	250'	2.75
	DWPE06MC	6.0	4.0	1.0	31.8	150	450	500'	5.50
	DWPE06MD	6.0	4.0	1.0	31.8	150	450	1000'	11.00
10mm	DWPE10MA	10.0	8.0	1.0	51.0	125	375	100'	2.10
	DWPE10MB_*	10.0	8.0	1.0	51.0	125	375	250'	5.25
	DWPE10MC	10.0	8.0	1.0	51.0	125	375	500'	10.50
	DWPE10MD	10.0	8.0	1.0	51.0	125	375	1000'	21.00
12mm	DWPE12MA	12.0	9.0	1.5	63.5	100	300	100'	2.50
	DWPE12MB_*	12.0	9.0	1.5	63.5	100	300	250'	6.50
	DWPE12MC	12.0	9.0	1.5	63.5	100	300	500'	13.00

_ Insert color designation into part number when ordering. * = Non Stock Packaged Length

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

PVC Tubing



™ (PVC) is suited for general, low-pressure, industrial applications for the conveyance of liquids and solids of suitable granular size. It is made from a PVC compound that complies with FDA regulations. Although it is primarily intended for low pressure applications, it will withstand the pressures shown.

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

Features

- Lightweight
- Flexible
- Food Grade
- Clear Color

Part Numbering System

PVC 14 38 A

Polyvinylchloride
Tubing I.D.
Tubing O.D.
Package Length

Package Lengths

A = 100'

Colors Available

Clear

Specifications

- Temperature Range:
+25°F To +150°F
- Hardness:
Shore A 75
- Meets FDA Requirements
- NSF 51 Certified to
100°F(38°C)
- USP Class VI Rated Materials
- RoHS Compliant
- Applications**
- Food & Beverage
- Drain Tubing
- Laboratory Tubing
- Wine Transfer
- Low Pressure Air Line
- Light Vacuum
- Wire Harness

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)
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

_ Insert color designation into part number when ordering.

Custom sizes, colors, lengths are available with minimum quantity.

MW PTFE Tubing



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

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

Package Lengths

A = 100'

Part Numbering System

MWPTFE 18 A NA

Polytetrafluoroethylene
Tubing O.D.
Package Length
Tubing Color

Colors Available

Natural

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"	PTFE18ANA	.125	.063	.031	.39	381	1524	100'	1.14
1/4"	PTFE14-18ANA	.250	.125	.063	1.18	372	1488	100'	2.29
	PTFE14-532ANA	.250	.156	.047	1.97	275	1100	100'	2.02
	PTFE14-316ANA	.250	.188	.031	2.56	174	696	100'	1.75
3/8"	PTFE38ANA	.375	.250	.063	4.33	240	960	100'	5.84
.438"	PTFE438-38ANA	.438	.375	.032	4.50	95	380	100'	6.0
1/2"	PTFE12ANA	.500	.375	.063	6.50	150	600	100'	6.5

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	PTFE04MANA	4.0	2.5	.75	25	292	1168	100'	1.51
6mm	PTFE06MANA	6.0	4.0	1.0	40	275	1100	100'	2.29
8mm	PTFE08MANA	8.0	6.0	1.0	60	138	552	100'	3.20
10mm	PTFE10MANA	10.0	8.0	1.0	100	112	448	100'	4.13
12mm	PTFE12MANA	12.0	10.0	1.0	100	105	420	100'	6.0

Custom sizes, colors, lengths are available with minimum quantity.

Features

Chemically Inert
Low Extractible
Biocompatible -
USP Class VI Approved
Flame Rating: UL 94 V0
ASTM - D3296
Meets FDA Requirements
Easily Cleaned

Specifications

Temperature Range:
-454°F To +500°F
Hardness: Shore D 55
Tolerance:
1/8" O.D. +/- .004
1/4" - 3/8" O.D. +/- .005
Vacuum Rating: To 28" Hg

Applications

Aerospace & Aviation
Electronic
Chemical Processing
Automotive & Medical
Industrial & Mechanical

FEP Tubing



TM FEP tubing is a more durable alternative to PTFE, yet more flexible. It is a semi-clear material with low permeability, plus it is UV resistant, abrasion resistant, and virtually chemically inert. FEP material meets UL94 V0 for flammability and also meets FDA requirements.

Package Lengths

A = 100'

Colors Available

Semi-Clear

Part Numbering System

MWFEP 18 A

Fluorinated Ethylene
Propylene Tubing O.D.
Package Length

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 (lbs)
1/8"	FEP18A	.125	.063	.031	.39	410	1640	100'	1.14
1/4"	FEP14-18A	.250	.125	.063	1.18	400	1600	100'	2.29
	FEP14-532A	.250	.156	.047	1.97	300	1200	100'	2.02
	FEP14-316A	.250	.188	.031	2.56	174	696	100'	1.75
3/8"	FEP38A	.375	.250	.063	4.33	240	960	100'	5.84
1/2"	FEP12A	.500	.375	.063	6.50	180	720	100'	6.5

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	Package (lbs)
4mm	FEP04MA	4.0	2.5	.75	25	292	1168	100'	1.51
6mm	FEP06MA	6.0	4.0	1.0	40	275	1100	100'	2.29
8mm	FEP08MA	8.0	6.0	1.0	60	180	720	100'	3.20
10mm	FEP10MA	10.0	8.0	1.0	75	133	532	100'	4.13
12mm	FEP12MA	12.0	10.0	1.0	100	120	408	100'	6.00

Features

- Flexible
- Chemically Inert
- Low Extractible
- Biocompatible -
- USP Class VI Approved
- Flame Rating: UL 94 V0
- ASTM - D3295
- Meets FDA Requirements
- Easily Cleaned

- Temperature Range: -400°F To +400°F
- Hardness: Shore D 55
- Tolerance: 1/8" O.D. +/- .004
- 1/4" - 3/8" O.D. +/- .005
- Vacuum Rating: To 28" Hg

Applications

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

Custom sizes, colors, lengths are available with minimum quantity.

Spatter Resistant Tubing



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.

Package Lengths

B = 250'
F = 100 Meters

Stock Color Chart: • = Stock, x = Non Stock

LE	BK	G	LB	R	Y	W
4mm/5/32	•	x	•	x	•	x
1/4	•	x	•	•	x	x
8mm/5/16	•	•	•	•	•	•
3/8	•	x	•	•	x	x
1/2	•	•	•	x	x	•
6mm	•	•	•	•	•	•
10mm	•	•	•	•	•	•
12mm	•	•	•	•	•	•

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

Fractional Sizes

	Part number	Inner Tube O.D.(IN)	Inner Tube I.D. (IN)	Out Jacket Thickness (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
SINGLE	LE532B	.156	.094	.039	.40	200	600	250'	6.1
	LE14B	.250	.156	.039	.59	180	540	250'	8.65
	LE516B	.312	.187	.039	.79	175	525	250'	11.59
	LE38B	.375	.250	.039	.98	150	450	250'	15.0
	LE12B	.500	.328	.039	1.17	150	450	250'	23.2
BONDED	2LE532B_	.156	.094	.039	.40	200	600	250'	12.2
	2LE14B_	.250	.156	.039	.59	180	540	250'	17.3
	2LE516B_	.312	.187	.039	.79	175	525	250'	23.18
	2LE38B	.375	.250	.039	.98	150	450	250'	30.8
	2LE12B	.500	.328	.039	1.17	150	450	250'	46.4

Part Numbering System

LE 12M F Y

LE Tubing
Tubing O.D.
Package Length
Tubing color
Insert color designation part number when

2LE 12M F Y

Bonded LE Tubing
Tubing O.D.
Package Length
Tubing color
Insert color designation part number when

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 Self Extinguishing Requirements

Applications

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

Spatter Resistant Tubing

Metric Sizes

	Part number	Inner Tube O.D.(mm)	Inner Tube I.D. (mm)	Out Jacket Thickness (mm)	Bend Radius (mm)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length (m)	Package Weight (lbs)
Single	LE04M/532F	4.0	2.5	1.0	10	200	600	100	8.0
	LE06MF	6.0	4.0	1.0	15	180	540	100	10.0
	LE08M/516F	8.0	5.0	1.0	20	175	525	100	15.2
	LE10MF	10.0	6.5	1.0	25	150	450	100	21.6
	LE12MF	12.0	8.0	1.0	30	150	450	100	28.0
Bonded	2LE04M/532F	4.0	2.5	1.0	10	200	600	100	16.0
	2LE06MF	6.0	4.0	1.0	15	180	540	100	20.0
	2LE08M/516F	8.0	5.0	1.0	20	175	525	100	30.4
	2LE10MF	10.0	6.5	1.0	25	150	450	100	43.2
	2LE12MF	12.0	8.0	1.0	30	150	450	100	56.0

_ In ert color designation into part number when ordering.

MonoShield® Single-Core Weld Tubing



Developed by ATP, MonoShield® Weld tubing is specially designed for use in and around welding equipment or other severe-service applications. MonoShield® is a 95 shore A Ether based, flame-resistant, polyurethane tubing. It's ether-based material gives it excellent hydrolysis properties making it suitable for use in water piping, as well as pneumatic piping and vacuum applications. It is

the only self extinguishing tubing to date that meets the UL94V0 specifications. MonoShield® Weld Tubing can be bonded together to create an ideal, color-coded solution for supply and return lines in robot welding applications. With no outer jacket to peel back, MonoShield® allows for ease and speed of installation when used with standard push-to-connect type fittings. Custom spiraling is available. See reverse side for details.

Package Lengths

A = 100'
B = 250'

Part Numbering System

MWMS 12M A Y

Single MS Tubing
Tubing O.D.
Package Length
Tubing color
Insert color designation
part number when

Stock Color Chart: • = Stock, x = Non Stock

MS	BK	G	LB	R	Y	W
4mm/5/32	x	x	x	x	x	x
1/4	•	x	•	x	x	•
8mm/5/16	•	x	•	x	x	•
3/8	•	x	•	x	x	•
1/2	•	x	•	x	x	•
6mm	•	x	•	x	x	•
10mm	•	x	•	x	x	•
12mm	•	x	•	x	x	•

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

Part Numbering System

MW2MS 12M A Y

Bonded MS Tubing
Tubing O.D.
Package Length
Tubing color
Insert color designation
part number when

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
- Silicone-Free
- Shore 95A
- Light Weight

Specifications

- Temperature Range: -68°F To +140°F
- Vacuum Rating: To 28" Hg
- Meets UL94V0 Self Extinguishing Requirements

Applications

- Robot Welding
- Spot Welding
- Severe Service
- Supply/Return Lines
- Cooling Water

MonoShield® Tubing Single-Core Weld Tubing sizes on page 20

MonoShield® Single-Core Weld Tubing

Fractional Sizes

	Part number	O.D. (IN)	I.D. (IN)	Bend Radius (IN)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
SINGLE	MS04M/532A	4mm,5/32	3/32	0.500	200	600	100'	.60
	MS04M/532B	4mm,5/32	3/32	0.500	200	600	250'	1.5
	MS14A	1/4	5/32	0.625	180	540	100'	1.5
	MS14B	1/4	5/32	0.625	180	540	250'	3.75
	MS08M/516A	8mm,5/16	3/16	0.750	175	525	100'	2.5
	MS08M/516B	8mm,5/16	/16	0.750	175	525	250'	6.25
	MS38A	3/8	1/4	1.000	150	450	100'	3.1
	MS38B	3/8	1/4	1.000	150	450	250'	7.75
	MS12A	1/2	21/64	1.250	150	450	100'	6.1
	MS12B	1/2	21/64	1.250	150	450	250'	15.25
BONDED	2MS04M/532A	4mm,5/32	3/32	0.500	200	600	100'	1.2
	2MS04M/532B	4mm,5/32	3/32	0.500	200	600	250'	3.0
	2MS14A	1/4	5/32	0.625	180	540	100'	3.0
	2MS14B	1/4	5/32	0.625	180	540	250'	7.5
	2MS08M/516A	8mm,5/16	3/16	0.750	175	525	100'	5.0
	2MS08M/516B	8mm,5/16	/16	0.750	175	525	250'	12.5
	2MS38A	3/8	1/4	1.000	150	450	100'	6.2
	2MS38B	3/8	1/4	1.000	150	450	250'	15.5
	2MS12A	1/2	21/64	1.250	150	450	100'	12.2
	2MS12B	1/2	21/64	1.250	150	450	250'	30.5

_ Insert color designation into part number when ordering.

Metric Sizes

	Part number	O.D. (mm)	I.D. (mm)	Bend Radius (mm)	W.P. @ 70° F (PSI)	3:1 Burst Pressure	Package Length	Package Weight (lbs)
SINGLE	MS06MA	6	4	16	180	540	100'	1.5
	MS06MB	6	4	16	180	540	250'	3.75
	MS10MA	10	6.5	25	150	450	100'	3.5
	MS10MB	10	6.5	25	150	450	250'	8.75
	MS12MA	12	8	30	150	450	100'	5.1
	MS12MB	12	8	30	150	450	250'	12.75
	MS16MA	16	11	55	110	330	100'	9.0
	MS16MB	16	11	55	110	330	250'	22.5
	2MS06MA	6	4	16	180	600	100'	3.0
	2MS06MB	6	4	16	180	540	250'	7.5
BONDED	2MS10MA	10	6.5	25	150	540	100'	7.0
	2MS10MB	10	6.5	25	150	525	250'	17.75
	2MS12MA	12	8	30	150	525	100'	10.2
	2MS12MB	12	8	30	150	450	250'	13.5
	2MS16MA	16	11	55	110	450	100'	18.0
	2MS16MB	16	11	55	110	450	250'	45.0

_ Insert color designation into part number when ordering.

**QUICK QUOTE PAGE
FILL IT OUT AND FAX IT IN
817-701=4004**

Tube	1	2	3	4	5	6	7	8	9	10
OD										
Color										

Configuration: Ribbon Stacked Special—Please Contact Me

Add Electric: ATP Standard Wire Special—Please Specify _____

Total Footage Required: 25' 50' 100' 250' 500' 1000' +1000'

Spiraled Technibond

Tube	1	2	3	4	5	6	7	8	9	10
OD										
Color										

Configuration: Ribbon Stacked Pyramid Special—Please Contact Me

Add Electric: ATP Standard Wire Special—Please Specify _____

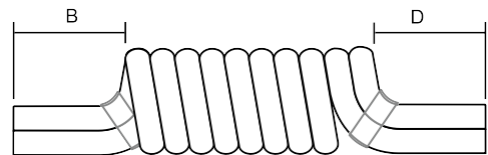
Working Length:

Tail Dimension B:

Tail Dimension D:

Fittings Required:

Quantity:



Contact Information

Contact _____ E-Mail _____

Company Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Decimal & Metric Equivalents

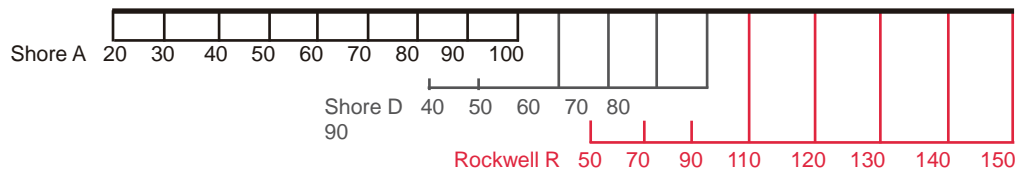
64ths	32nds	16ths	8ths	Decimal	MM
5/64				0.07812	1.864
	3/32			0.09375	2.381
7/64				0.10938	2.778
		1/8		0.12500	3.175
13/64				0.20312	5.195
	7/32			0.21875	5.556
15/64				0.23438	5.953
		1/4		0.25000	6.350
21/64				0.32812	8.334
	11/32			0.34375	8.731
23/64				0.35938	9.128
		3/8		0.37500	9.525
25/64				0.39062	9.922
	13/32			0.40625	10.309
27/64				0.42186	10.716
	7/16			0.43750	11.113
29/64				0.45312	11.509
	15/32			0.46875	11.908
31/64				0.48438	12.303
		1/2		0.50000	12.700

64ths	32nds	16ths	8ths	Decimal	MM
33/64				0.51582	13.097
	17/32			0.53125	13.494
35/64				0.54688	13.891
		9/16		0.56250	14.288
37/64				0.57812	14.684
	19/32			0.59375	15.081
39/64				0.60938	15.478
		5/8		0.62500	15.875
45/64				0.70312	17.859
	23/32			0.71875	18.256
47/64				0.73438	18.653
		3/4		0.75000	19.050
53/64				0.82812	21.034
	27/32			0.84375	21.431
55/64				0.85938	21.823
		7/8		0.87500	22.225
61/64				0.95312	24.209
	31/32			0.96875	24.605
63/64				0.98438	25.003
		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	Centimeters	.01	Meters	Centimeters	100
	Millimeter	10		Feet	3.281
Feet	Centimeter	30.48		Inches	39.37
	Inches	12.00		Kilometers	.001
Meters	Miles	.0001894		Miles	.0006214
Miles	Millimeters	.0001894		Millimeters	1000
	Yard	.6777		Yards	1.093
Grams	Ounces	.035	Temperature Conversions		
	Pounds	.002	To convert Fahrenheit degrees into Celsius, subtract 32, multiply by 5, and divide by 9.		
	Kilogram	.001	To convert Celsius into Fahrenheit, multiply by 9, divide by 5, and add 32.		

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.