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

LE 12M F Y

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

2LE 12M F Y

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

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

Package Lengths

B = 250’
F = 100 Meters

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

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	LE14B_	.250	.156	.039	.59	180	540	250’	8.65
	LE38B_	.375	.250	.039	.98	150	450	250’	15.00
	LE12B_	.500	.328	.039	1.17	150	450	250’	23.20
	2LE14B_	.250	.156	.039	.59	180	540	250’	17.30
	2LE38B_	.375	.250	.039	.98	150	450	250’	30.80
	2LE12B_	.500	.328	.039	1.17	150	450	250’	46.40

_Insert color designation into part number when ordering.

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	package weight (lbs)
SINGLE	LE04M/532F_	4.0	2.5	1.0	10	200	600	100m	8.00
	LE06MF_	6.0	4.0	1.0	15	180	540	100m	10.00
	LE08M/516F_	8.0	5.0	1.0	20	175	525	100m	15.20
	LE10MF_	10.0	6.5	1.0	25	150	450	100m	21.60
	LE12MF_	12.0	8.0	1.0	30	150	450	100m	28.00
BONDED	2LE04M/532F_	4.0	2.5	1.0	10	200	600	100m	16.00
	2LE06MF_	6.0	4.0	1.0	15	180	540	100m	20.00
	2LE08M/516F_	8.0	5.0	1.0	20	175	525	100m	30.40
	2LE10MF_	10.0	6.5	1.0	25	150	450	100m	43.20
	2LE12MF_	12.0	8.0	1.0	30	150	450	100m	56.00

_Insert color designation into part number when ordering.

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

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
Centimeters	Inches	.394
	Feet	.0382
	Meters	.01
	Millimeter	10
Feet	Centimeter	30.48
	Inches	12.00
	Meters	.3048
	Miles	.0001894
	Yard	.6777
Grams	Ounces	.035
	Pounds	.002
	Kilogram	.001

To Convert	Into	Multiply By
Inches	Centimeters	2.54
	Feet	.0833
Meters	Centimeters	100
	Feet	3.281
	Inches	39.37
	Kilometers	.001
	Miles	.0006214
	Millimeters	1000
	Yards	1.093

Temperature Conversions

To convert Fahrenheit degrees into Celsius, subtract 32, multiply by 5, and divide by 9.

To convert Celsius into Fahrenheit, multiply by 9, divide by 5, and add 32.

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						
Dioctyl 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.
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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.