

The background is a collage of four images: top-left shows a construction site with a yellow hard hat and blue pipes in the foreground; top-right shows a large orange crane at a construction site; bottom-left shows rows of server racks in a data center; bottom-right shows a close-up of metal cable trays.

CATALOG



AFC

CABLE SYSTEMS®

LIQUID-TUFF™ FLEXIBLE LIQUIDTIGHT CONDUIT CATALOG

Industrial & Commercial Liquidtight Conduit and Flexible Metal Conduit

A PART OF



AFC's Flexible Liquidtight Conduit

AFC Cable Systems® is pleased to announce the launch of our new UL Liquidtight Flexible Steel Conduit Type LFMC NSF® 169 Component for Splash Zones. This new component provides flexible conduit capabilities for use in Splash Zones with equipment and other devices associated with food production.

If your application requires a product that inhibits bacteria growth and does not degrade when using bleach for cleaning and sterilization, then we have the answer. AFC's UL LFMC Liquidtight for Splash Zones is offered in Gray, Black, Red, Orange, Yellow, Green or Blue in addition to the standard White.

With AFC's UL Liquid-Tuff Liquidtight Flexible Steel Conduit for Splash Zones, we've manufactured a flexible rugged moisture, oil and sunlight resistant product designed to meet the demands of meat packing, restaurants, food processing, poultry packing and pharmaceutical facilities.

We've also redesigned new LIQUID-TUFF™ packaging. Our Liquidtight products now come in improved boxes, which include reinforced hand-hold knockouts, easy to read labeling with product color coding, and high visibility printed put up and trade sizes. This package allows for easy handling and storage for any jobsite.

Another product enhancement is the long length reels we now offer. These newer put-ups provide inventory efficiencies, reduce waste, and allow for longer system runs.

AFC's Liquid-Tuff conduits have expansive ratings that meet or exceed industry standards when compared with manufacturers in the market today. See our side by side comparison chart, on page 00.

We are proud of our manufacturing processes located in the USA with quality control and process driven expertise from raw materials to finished goods. Whether you need flexible wiring raceways for harsh, oily, wet, hot, cold or hazardous environments, AFC's expansive line is ready to provide superior protection.

AFC Cable Systems, Inc, your trusted partner for innovation yesterday, today and into the future.



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Table of Contents

Resistance/Reference Information	4
• Connector Cross-Reference Guide	4
• Product Comparison Chart	5
• Safety Data Sheet (SDS)	6
• Chemical Resistance Guide	7-13
• Notes	14
Industrial Liquidtight Flexible Conduit.....	15
• UL Hi-Low Temperature Type LFMC	16-17
• UL Low Smoke Zero Halogen – Type LSZH, Type LFMC.....	18-20
• Non-UL Type LSZH-VF	22-23
• Non-UL Oil Resistant/High Temperature Liquidtight Flexible Steel Conduit	24-25
• Non-UL Extreme Temperature	26-27
• UL Orange Type LFNC-A	28-29
• UL NSF® 169 Component for Splash Zones, Type LFMC.....	30-31
• Notes	32
Commercial Liquidtight Flexible Conduit.....	33
• UL Type LFMC (black, gray, red, orange, yellow, green)	34-37
• UL Computer Blue Type LFMC.....	38-39
• Non-UL VF	40-41
• Type LFNC-B	42-43
• Ultraflex Liquidtight	44-45
• HYDROTITE™ – Type “COM-BLUE” CSA Flexible Conduit ..	46
• HYDROTITE™ – Type “CSA” CSA Flexible Conduit	47
Flexible Metal Conduit	48
• Reduced Wall Flexible Steel Conduit	49-50
• Reduced Wall Aluminum Flexible Metal Conduit	51-52
• Extra Flexible Conduit	53
• Flexcon Extra-Flexible Steel Conduit	54
• Full Wall Flexible Metal Conduit (Steel).....	55
• Type “RAY-FLEX” CSA Aluminum Flexible Conduit	56
• AFC Fittings	57
• Electrical & Support Brands	58

LIQUID-TUFF™ Metallic Conduits

Trade Size	Internal Dia. inch (min/max)	External Diameter		AFC	Arlington	Bridgeport	Madison	OZ-Gedney	Neer	Regal	T & B
		Over Conduit inch (min/max)	Over Jacket inch (min/max)								
3/8	0.484/0.504	0.594/0.614	0.690/0.710	LS38	LT38	429-LT2	MSTR-38	4Q-38	LMM-01	5800	5231
1/2	0.622/0.642	0.732/0.765	0.820/0.840	LS50	LT50	430-LT2	MSTR-50	4Q-50	LMM-11	5801	5232
3/4	0.820/0.840	0.930/0.960	1.030/1.050	LS75	LT75	431-LT2	MSTR-75	4Q-75	LMM-21	5802	5233
1	1.041/1.066	1.201/1.226	1.290/1.315	LS100	LT100	432-LT2	MSTR-100	4Q-100	LMM-31	5803	5234
1-1/4	1.380/1.410	1.540/1.570	1.630/1.660	LS125	LT125	433-LT2	MSTR-125	4Q-125	LMM-41	5804	5235
1-1/2	1.575/1.600	1.735/1.770	1.865/1.900	LS150	LT150	434-LT2	MSTR-150	4Q-150	LMM-51	5805	5236
2	2.020/2.045	2.180/2.215	2.340/2.375	LS200	LT200	435-LT2	MSTR-200	4Q-200	LMM-61	5806	5237
2-1/2	2.480/2.505	2.640/2.675	2.840/2.875	LS250	LT250	436-LT2	MSTR-250-B	4Q-250	LMM-71	—	5238
3	3.070/3.100	3.295/3.335	3.460/3.500	LS300	LT300	437-LT2	MSTR-300-B	4Q-300	LMM-81	—	5239
3-1/2	3.500/3.540	3.720/3.789	3.960/4.000	LS350	LT350	438-LT2	MSTR-350-B	4Q-350	LMM-85	—	LT-209*
4	4.000/4.040	4.220/4.280	4.460/4.500	LS400	LT400	439-LT2	MSTR-400-B	4Q-400	LMM-91	—	5240

LIQUID-TUFF™ Nonmetallic Conduits

Trade Size	Internal Dia. inch (min/max)	External Dia. inch (min/max)	AFC	Arlington	Bridgeport	Madison	Neer	Regal	T & B
3/8	0.484/0.504	0.690/0.710	0901-22-00	NMLT38	429-NMLT	NMLQ-1038	LMM-01	—	LT38P
1/2	0.622/0.642	0.820/0.840	0902-22-00	NMLT50	430-NMLT	NMLQ-1050	LMM-11	—	LT50P
3/4	0.820/0.840	1.030/1.050	0903-10-00	NMLT75	431-NMLT	NMLQ-1075	LMM-21	—	LT75P
1	1.041/1.066	1.290/1.315	0904-05-00	NMLT100	432-NMLT	NMLQ-1100	LMM-31	—	LT100P
1-1/4	1.380/1.410	1.630/1.660	0905-05-00	NMLT125	433-NMLT	NMLQ-1125	LMM-41	—	LT125P
1-1/2	1.575/1.600	1.865/1.900	0906-02-00	NMLT150	434-NMLT	NMLQ-1150	LMM-51	—	LT150P
2	2.020/2.045	2.340/2.375	0907-02-00	NMLT200	435-NMLT	NMLQ-1200	LMM-61	—	LT200P

Flexible Metal Conduits

Full Wall, Reduced Wall, and Type EF Steel/Aluminum Flexible Conduits

Trade Size	Internal Dia. inch (min/max)	External Dia. inch (min/max)	AFC	Arlington	Bridgeport	Electroline/ Steel City	OZ-Gedney	Neer	Regal	T & B
5/16	0.312/0.327	0.470/0.510	—	—	—	—	—	—	—	252
3/8	0.375/0.393	0.560/0.610	AFC-50, 52**	L42	403-DC2	L42/XC-269	C-5	SC-38	730	—
1/2	0.625/0.645	0.860/0.920	AFC-75**, 5075†	L421	407-DC2	L42-1/XC-270	C-8	SC-50	731	302
3/4	0.812/0.835	1.045/1.105	—	L422	408-DC2	L42-2/XC-272	24-34	SC-75	732	304
1	1.000/1.040	1.300/1.380	—	L423	410-DC2	L42-3/XC-273	24-100	SC-100	733	306
1-1/4	1.250/1.300	1.550/1.630	—	L424	412-DC2	L42-4/XC-274	24-125	SC-125	734	308
1-1/2	1.500/1.575	1.850/1.950	—	L425	414-DC2	L42-5/XC-275	24-150	SC-150	735	310
2	2.000/2.080	2.350/2.450	—	L426	416-DC2	L42-6/XC-276	24-200	SC-200	736	312
2-1/2	2.5	2.860/3.060	—	L427	417-DC2	L42-7/XC-277	24-250	SC-250	737	314
3	3	3.360/3.560	—	L428	418-DC2	L42-8/XC-278	24-300	SC-300	738	316
3-1/2	3.5	3.860/4.060	—	L429	419-DC2	L42-9/XC-278A	KC-350	SC-350	739	—
4	4	4.360/4.560	—	L4210	420-DC2	L42-10/XC-2710	KC-400	SC-400	740	—

* Denotes manufactured by Steel City

** For RW Flexible Metal Conduit

† For RW Flexible Metal Conduit in steel only

†† For LFNC-B Conduit only

The connector cross-reference guide is provided as a service to our customers. The information contained herein is based on manufacturer published literature. Consult appropriate manufacturer for more information.

Note: All brand names, product names and trademarks are the property of their respective holders.

Brand	Product	Halogen Free	Oil Resistant	Acid Resistant	Sun Resistant	Direct Burial	Size Range	Working Temperature	Listings
General Purpose Listed Products									
AFC	UL LFMC		X	X	X	X	3/8" - 4"	-30°C/80°C Dry - 70°C Oil	UL/CSA Direct burial all sizes
AFC	UL Computer Blue		X	X	X	X	3/8" - 4"	-30°C/75°C Dry - 70°C Oil	UL/CSA Direct burial all sizes
AFC	CSA LFMC		X	X	X	X	3/8" - 4"	-30°C/75°C Dry - 60°C Oil	CSA Direct burial all sizes, No Bond Wire
Electri-Flex	LA		X	X	X	X	3/8" - 4"	-30°C/80°C Dry - 70°C Oil	UL/CSA
Electri-Flex	CSA		X	X	X		3/8" - 4"	-40°C/75°C Dry - NL Oil	CSA No Bond wire
Electri-Flex	LA/Blu		X	X	X	X	3/8" - 4"	-30°C/80°C Dry - 70°C Oil	UL/CSA
Anamet	UA		X	X	X	X	3/8" - 4"	-20°C/60°C Dry - 60°C Oil	UL/CSA
Southwire	UL		X	X	X	X	3/8" - 4"	-30°C/80°C Dry - 60°C Oil	UL/CSA
Southwire	CB		X	X	X	X	3/8" - 4"	-30°C/80°C Dry - 60°C Oil	UL/CSA
Splash Zone Products									
AFC/KT	Food Grade		X	X	X		3/8" - 4"	-30°C/80°C Dry - 70°C Oil	UL/CSA NSF® 169 Component
Electri-Flex	LAFG		X	X			3/8" - 2"	-20°C/60°C Dry - NL Oil	UL NSF® 169 Component
Anamet	FG						3/8" - 2"	-20°C/60°C Dry - 60°C Oil	NSF® 169 Component
All Temperature Products									
AFC	Hi-Lo Temp		X	X	X	X	3/8" - 4"	-55°C/105°C Dry - 70°C Oil	UL Direct burial all sizes
Electri-Flex	ATLA		X	X	X	X	3/8" - 4"	-55°C/105°C Dry - 70°C Oil	UL/CSA
Anamet	HTUA		X	X	Not Listed	X	3/8" - 4"	-46°C/105°C Dry - NL Oil	UL
Southwire	HC		X	X	X	X	3/8" - 4"	-40°C/105°C Dry - NL Oil	
Low Smoke Zero Halogen Products									
AFC	LSZH	X	X		X	X	3/8" - 4"	-40°C/80°C Dry - 70°C Oil	
AFC	UL LSZH	X	X		X	X	3/8" - 4"	-40°C/80°C Dry - 70°C Oil	UL
Electri-Flex	ZHLA	X	X		X	X	3/8" - 4"	-40°C/80°C Dry - 70°C Oil	UL
Anamet	ZHUA	X	X		X	X	3/8" - 4"	-30°C/80°C Dry - 70°C Oil	UL
Southwire	NH	X	X	X	X		3/8" - 4"	-10°C/80°C Dry - 60°C Oil	
Oil Resistant Products									
AFC	High Temp/OR		X	X	X		3/8" - 4"	-26°C/105°C Dry - 70°C Oil	PVC
Electri-Flex	LOR		X	X	X	Not Listed	3/8" - 6"	-20°C/60°C Dry - NL Oil	PVC
Anamet	OR		X	X	X	Not Listed	3/8" - 6"	-23°C/105°C Dry - NL Oil	PVC
Extra Flexible Products									
AFC	Non-UL LFMC		X	X	X		3/8" - 4"	-20°C/60°C Dry - 60°C Oil	
Electri-Flex	LT		X	X	X		5/16" - 6"	-20°C/80°C Dry - NL Oil	
Electri-Flex	EF		X	X	Not Listed		3/8" - 2"	-20°C/80°C Dry - 60°C Oil	
Anamet	EFST		X	X	X		3/8" - 6"	-20°C/60°C Dry - 60°C Oil	
Anamet	LD/EF		X	X	X		3/8" - 2"	-20°C/60°C Dry - 60°C Oil	
Anamet	EF		X	X	X		3/8" - 2"	-20°C/60°C Dry - 60°C Oil	
Southwire	EF		X	X	X		3/8" - 4"	-10°C/60°C Dry - 60°C Oil	
Additional Non-Listed Products									
AFC	LSZH	X	X		X	X	3/8" - 4"	-40°C/80°C Dry - 70°C Oil	TPU
AFC	Extreme Temp	X	X		X	Not Listed	3/8" - 4"	-60°C/150°C Dry - NL Oil	TPR
Electri-Flex	ATX	X	X		X	Not Listed	3/8" - 4"	-60°C/150°C Dry - NL Oil	TPR
Electri-Flex	CEA	X	X		X	Not Listed	3/8" - 6"	-40°C/80°C Dry - NL Oil	TPU

Note: All brand names, product names and trademarks are the property of their respective holders.



AFC
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**SUBJECT: Safety Data Sheets (SDS)
AFC LIQUID-TUFF™ Flexible Conduits**

An official notice from OSHA confirms that the electrical products (cables, conduits, fittings, modular wiring, etc.) manufactured by AFC come under the classification of “Articles” under the Hazard Communication Standard. By definition, an Article is defined as a product that does not “release or otherwise result in exposure to hazardous chemicals under normal conditions of use.” Consequently, the electrical products manufactured by AFC do not require Safety Data Sheets.

The lubricants used in the manufacturing of conduits and cables are also covered by OSHA as non-hazardous and are primarily vegetable based materials.

Please contact us if you have any additional questions.

Chemical Resistance/Reference Information

The information contained in the Chemical Resistance Guide has been compiled from various literature references and sources. It may be considered as a basis for chemical resistance but not as a guarantee. It is strongly advised that specific Liquid-Tuff™ products be tested under actual service conditions to determine suitability. Liquid-Tuff samples for chemical resistance testing available upon request.

CHEMICAL RESISTANCE/REFERENCE INFORMATION



Jacket Material Key

PVC = Polyvinyl Chloride

TPR = Thermoplastic Elastomer

TPU = Thermoplastic Polyurethane

Jacket Material

Chemical	%	PVC	TPR	TPU
A				
ASTM® Fuel A		F	G	G
ASTM® Fuel B		X	F	F
ASTM® Fuel C			F	F
ASTM® Oil No. 1		G	G	G
ASTM® Oil No. 2				G
ASTM® Oil No. 3		F		G
Acetaldehyde				
Acetamide				
Acetate Solvents		X		
Acetic Acid (Glacial)		F		G
Acetic Acid	40	G	E	G
Acetic Acid	10	G	E	G
Acetic Anhydride		X		
Acetone		X		X
Acetyl Bromide				
Acetyl Chloride				
Acetylene				
Acrylonitrile		E	E	
Adipic Acid				
Alcohols				
Alcohols (Aliphatic)		F		
Alkalies		E		
Allyl Alcohol				
Aluminum Salts		E		
Aluminum Chloride		E		G
Aluminum Sulfate (Alums)		E		
Aluminum Sulfide				
Alums				
Ammonia				G
Ammonia (Dry Gas)		E		G
Ammonia (Anhydrous Liquids)		X		
Ammonia (Aqueous)		E		
Ammoniated Latex		E		
Ammonium Acetate				
Ammonium Carbonate				
Ammonium Chloride		E		G
Ammonium Chloride	10	E		
Ammonium Hydroxide		E		
Ammonium Nitrate				

Rating Key

E = Resistant: Good for continuous exposure

G = Good for intermittent exposure

F = Use only where limited life is acceptable

X = Do not use

Jacket Material

Chemical	%	PVC	TPR	TPU
A				
Ammonium Persulfate				
Ammonium Salts				
Ammonium Sulfate				
Ammonium Sulfide				
Ammonium Thiocyanide				
Amyl Acetate		X		
Amyl Alcohol				
Amyl Chloride				
Aniline		E		X
Aniline Hydrochloride				
Aniline Oils		X		
Animal Fats & Oils		E		
Aniseed Oil				
Anthracene		X		
Antifreeze Compounds	50/50		E	
Antimony Salts				
Aqua Regia				
Aromatic Fuels		X		
Aromatic Hydrocarbons		X		
Arsenic Salts				
Asphalt		X		
Attar of Roses				
B				
Banana Oil X		X		
Barium Carbonate				
Barium Chloride		E		
Barium Hydroxide		E		
Barium Salts				
Barium Sulfide		E		
Battery Acid				
Benzaldehyde				
Benzaldehyde				
Benzene		X	X	X
Benzine (Petroleum Ether)		F		
Benzoic Acid				
Benzole				
Benzyl				X
Bitumen				
Borax		E		
Bordeaux Mixture		E		
Boric Acid		E		G

Jacket Material Key

PVC = Polyvinyl Chloride

TPR = Thermoplastic Elastomer

TPU = Thermoplastic Polyurethane

Jacket Material

Chemical	%	PVC	TPR	TPU
B				
Brake Fluid			E	
Brake Fluid A				X
Brine		E		
Bromine		X	X	
Bromobenzene			X	
Bunker Oil				
Butane				G
Butanol				
Butyl Acetate		X	E	X
Butyl Alcohol		G		X
Butylene Glycol				
Butyric Acid				
C				
Calcium Carbonate				
Calcium Chloride	20	E	E	G
Calcium Chloride	10	E	E	G
Calcium Hydroxide		E		
Calcium Hypochlorite		E		
Calcium Nitrate				
Calcium Sulfate				
Camphor				
Carbolic Acid (Phenol)		G		
Carbon Dioxide		E		
Carbon Disulfide		X		
Carbon Tetrachloride		X		X
Carbonic Acid		E		
Casein		E		
Castor Oil		E		
Catechol				
Caustic Soda		E		E
Cello-Solv X				
Chlorinated Hydrocarbons X				
Chlorinated Lime				
Chlorine				X
Chlorine (water solution)	40	F		G
Chlorine Gas (dry & wet)		X		
Chloroacetic Acid				
Chlorobenzene		X		X
Chlorobromomethane				
Chloroform		X		X
Chrome Baths				

Rating Key

E = Resistant: Good for continuous exposure

G = Good for intermittent exposure

F = Use only where limited life is acceptable

X = Do not use

Jacket Material

Chemical	%	PVC	TPR	TPU
C				
Chromic Acid	40	F		X
Chromic Acid	10	G		
Chromic Acid	1	E		
Chromium Potassium Sulfate				
Chromium Salts				
Citric Acid		E		
Coal Tar		X		
Coconut Oil		F		
Copper Salts				
Corn Oil		E		
Cottonseed Oil		F		
Creosote		X		
Cresol		F		
Cresylic Acid		X		
Cupric Chloride				
Cupric Nitrate				
Cupric Sulfate				
Cyclohexane		G	X	X
Cyclohexanol				
Cyclohexanone		G		
D				
DDT Weed Killer		E		
DOP				
DTE Oil				
Decalin				
Degreasing Fluids		X		
Detergents (dish washing)		E	E	
Di Iso Cyante		F		
Di Methyl Formamide		X		
Di Methyl Hydrazine		X		
Di-isodecyl Phthalate		X		
Dibutyl Ether				
Dibutyl Phthalate		X		
Dichlorobenzene				
Dichloroethylene		X		
Diesel Fuel		X		G
Diesel Oils		F		
Diester Oil				
Diethyl Ether		E	E	

Jacket Material Key

PVC = Polyvinyl Chloride

TPR = Thermoplastic Elastomer

TPU = Thermoplastic Polyurethane

Jacket Material

Chemical	%	PVC	TPR	TPU
D				
Diethylene Glycol		G		
Dimethyl Acetamide				
Dimethyl Formamide			E	
Diethyl Phthalate (DOP)		X	E	E
Dioxane			E	
Dodecyl Mercaptan				
Dow General Weed Killer (H2O)		G		
Dow General Weed Killer (Phenol)		X		
Dowtherm				
E				
Edible Fats and Oils				
Esters		X		
Ether		X		X
Ethyl Acetate		X		X
Ethyl Alcohol (Ethanol)		F	E	X
Ethyl Bromide				
Ethyl Chloride				
Ethylene Chloride				G
Ethylene Dichloride		X		
Ethylene Glycol	50	G		G
Ethylene Oxide		X		
F				
Fatty Acids		E		
Ferric Chloride		E		G
Ferric Nitrate				
Ferric Sulfate		E		
Ferrous Chloride		E		
Ferrous Sulfate		E		
Fluorochlorohydrocarbons				
Formaldehyde	40	X		
Formalin				
Formamide				
Formic Acid	85			X
Formic Acid	40			X
Formic Acid	10	E		X
Freon			F	X
Freon 12				X
Freons		X		
Fuel Oil		G		
Furfural		F		

Rating Key

E = Resistant: Good for continuous exposure

G = Good for intermittent exposure

F = Use only where limited life is acceptable

X = Do not use

Jacket Material

Chemical	%	PVC	TPR	TPU
G				
Gallic Acid		E		
Gasoline - 100 Octane		F		X
Glycerine		E	E	E
Glycol				E
Glycolic Acid				
Grease		E	G	E
Green Sulfate Liquor		E		
H				
Heptachlor in Petroleum Solvents		E		
Heptane		F		G
Hexane		F	G	G
Hydraulic Fluids - Ester Base		X		
Hydraulic Fluids - Petroleum Base		F		
Hdrazine				
Hydrobromic Acid		E		
Hydrocarbon Oil				
Hydrochloric Acid (Muriatic)	40	F		
Hydrochloric Acid	10	G	E	
Hydrochloric Acid	1	E	E	
Hydrocyanic Acid				
Hydrofluoric Acid	70	X		
Hydrofluoric Acid 10	10			
Hydrofluoroboric Acid	40	F		
Hydrofluoroboric Acid	10	G		
Hydrogen				
Hydrogen Chloride				G
Hydrogen Chloride				G
Hydrogen Fluoride				
Hydrogen Peroxide	30	G		
Hydrogen Peroxide	10	E		
Hydrogen Peroxide	2	E		E
Hydrogen Sulfide				
Hydrolc Fluid				G
Hydrolodic Acid				
I				
Ink				
Iodine Solution X				X
Iron Salts - Acid Soln.				
Iron Salts - Neut. Soln.				
Isooctane		F		
Isopropanol				

Jacket Material Key

PVC = Polyvinyl Chloride

TPR = Thermoplastic Elastomer

TPU = Thermoplastic Polyurethane

Jacket Material

Chemical	%	PVC	TPR	TPU
I				
Isopropyl Acetate		X		
Isopropyl Alcohol		G		X
J				
JP-4 Oil				
Jet Fuels (JP-3, 4, and 5)		F		
K				
Kerosene		F		G
Ketones		X		
L				
Lacquer Thinners		X		
Lactic Acid	90			F
Lactic Acid	50			F
Lactic Acid	5			F
Lanolin				
Lead Acetate				
Lead Salts				
Linseed Oil		E		
Lox				
Lubricating Oils, Greases, Soaps		E		
M				
MIL-D-5606 Oil				
MIL-L-7808 Oil				
Magnesium Chloride		E		G
Magnesium Hydroxide	10	E		
Magnesium Salts				
Magnesium Sulfate		E		
Malathion 50 in Aromatics		X		
Malic Acid		E		
Mercury				
Mercury Salts				
Methanol	10			X
Methyl Acetate		X		X
Methyl Alcohol		F		
Methyl Bromide		X		
Methylene Chloride		X		X
Methyl Ethyl Ketone		X	E	X
Methyl Glycol				X
Methyl Isobutyl Ketone		X		
Mineral Oil		E		G
Monochlorobenzene		X		
Motor Fuels				
Motor Oil 20W				G

Rating Key

E = Resistant: Good for continuous exposure

G = Good for intermittent exposure

F = Use only where limited life is acceptable

X = Do not use

Jacket Material

Chemical	%	PVC	TPR	TPU
M				
Muriatic Acid (See Hydrochloric Acid)				
N				
Naphtha		F		E
Naphthalene		X		
Natural Gas				
Nickel Salts				
Nitric Acid		X		X
Nitric Acid	70	F		X
Nitric Acid	35	G		X
Nitric Acid	10	E		X
Nitrobenzene		X	E	
Nitrogen				
Nitromethane				
Nitropropane		X		
N-Methyl Pyrrolidone				X
O				
Octane				
Oil of Turpentine				
Oleic Acid		E		
Oleum		X		
Oxalic Acid		E		
Oxygen				
Oxygen - Liquid				
Ozone				
P				
Paint		X		
Paint Thinners		X		
Palmitic Acid		E		
Paper Chemicals				
Paraffin Oil				G
Pentachlorophenol Oil		G		
Pentane		F		
Perchloric Acid	70	X		
Perchloric Acid	10	E		
Perchloroethylene		X		X
Petroleum				G
Petroleum Ether		F		
Petroleum Spirits				
Phenol		G		

Jacket Material Key

PVC = Polyvinyl Chloride

TPR = Thermoplastic Elastomer

TPU = Thermoplastic Polyurethane

Jacket Material

Chemical	%	PVC	TPR	TPU
P				
Phenyl Ethyl Alcohol				
Phosphoric Acid	85	E		X
Phosphoric Acid	50	E		X
Phosphoric Acid	10	E		X
Photographic Developer		E		
Phthalates		X		
Pitch		G		
Plasticizers (Phthalates, Phosphates)				
Polyester Resin with Styrene				
Potash				
Potassium Bromide				
Potassium Chlorate				
Potassium Chloride	40			G
Potassium Cyanide				
Potassium Hydroxide	50	E		G
Potassium Hydroxide	10	E	E	G
Potassium Iodide				
Potassium Nitrate				
Potassium Permanganate	5			X
Potassium Salts				
Potassium Sulfate				
Power Steering Fluid		X		
Propane		E		
Propanol			E	
Propyl Alcohol		G		
Propylene Glycol		E		
Pydraul		X		
Pydraul Oil			G	
Pyridine			E	X
R				
Resorcinol				
Ritchfield "A" Weed Killer		F		
S				
SEA No. 10 Oil				
Salicylic Acid				
Salt				
Seawater		E	E	E
Silicic Acid				
Silicone Oil		E		

Rating Key

E = Resistant: Good for continuous exposure

G = Good for intermittent exposure

F = Use only where limited life is acceptable

X = Do not use

Jacket Material

Chemical	%	PVC	TPR	TPU
S				
Silver Nitrate		F		
Silver Salts				
Skydrol Oil - Type B		X	E	X
Soap				
Soap Solution				
Sodium Acetate				
Sodium Bicarbonate				
Sodium Bisulfite				
Sodium Borate				
Sodium Bromide				
Sodium Carbonate				
Sodium Carbonate				
Sodium Chlorate				
Sodium Chloride	15		E	G
Sodium Chlorite				
Sodium Cyanide		E		
Sodium Dichromate				
Sodium Ferrocyanide				
Sodium Fluoride				
Sodium Hydrosulfite				
Sodium Hydroxide		G		X
Sodium Hydroxide	50	E	E	X
Sodium Hydroxide	10	E	E	G
Sodium Hypochlorite	PH13	G		E
Sodium Nitrate				
Sodium Nitrate				
Sodium Nitrite				
Sodium Perborate				
Sodium Phosphate				
Sodium Silicate				
Sodium Sulfate				
Sodium Sulfide				
Sodium Sulfite				
Sodium Thiosulfite				
Solvent Naphtha				
Solvesso		X		
Soybean Oil		F		
Stoddard Solvent		X		
Styrene		X		
Sulfur				
Sulfur Dioxide				

Jacket Material Key

PVC = Polyvinyl Chloride

TPR = Thermoplastic Elastomer

TPU = Thermoplastic Polyurethane

Jacket Material				
Chemical	%	PVC	TPR	TPU
S				
Sulfur Dioxide (Liquid)		X		
Sulfuric Acid		X	E	X
Sulfuric Acid	75	F	E	X
Sulfuric Acid	60	G	E	X
Sulfuric Acid	40	E	E	X
Sulfuric Acid	25	E	E	F
Sulfuric Acid	10	E	E	G
Sulfurous Acid	40	G		
T				
Tall Oil X		X		
Tallow				
Tannic Acid		E		
Tar				
Tartaric Acid				
Tea				
Tetra Ethyl Lead		X		
Tetra Hydro Furan		X		X
Tetrachloroethylene				X
Tetraline				
Thionyl Chloride				
Tin Salts				
Titanium Salts				
Toluene		X		X
Toluol		X		
Transformer Oil				
Transmission Oil			F	
Trichlorethane		X		
Trichlorethylene		X	X	X
Trichloroacetic Acid				
Tricresyl Phosphate				
Tricresyl Phosphate (Skydrol)		X		X
Triethanol Amine		F		
Trisodium Phosphate		E		
Tung Oil		F		
Turpentine		F	F	G
U				
Urea				
V				
Varnish				
Varsol		X		
Vaseline				

Rating Key

E = Resistant: Good for continuous exposure

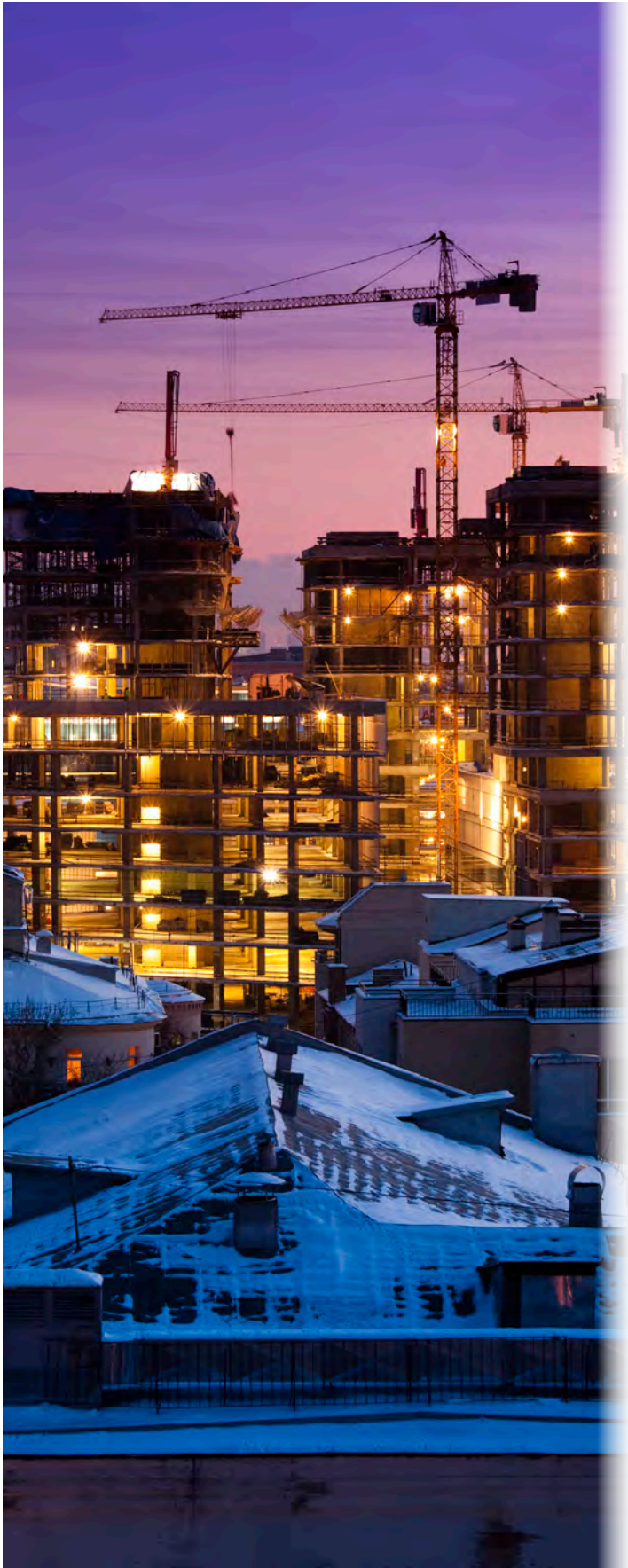
G = Good for intermittent exposure

F = Use only where limited life is acceptable

X = Do not use

Jacket Material				
Chemical	%	PVC	TPR	TPU
V				
Vegetable Oils and Juices		E		
Vinegar		E		
Vinyl Chloride		X		
W				
Water		E	E	
Water 23° C				
Water 70° C				
Wax				
Wood Preservatives		X		
X				
Xylene		X	F	X
Xylols X		X		
Z				
Zinc Chloride		E	E	
Zinc Sulfate		E		

[illegible]



Industrial Liquidtight Flexible Conduits

INDUSTRIAL

- UL Hi-Low Temperature
Type LFMC..... 16-17
- UL Low Smoke Zero Halogen -
Type LSZH Type LFMC 18-20
- Non-UL LSZH-VF 22-23
- Non-UL Oil Resistant/High Temperature
Liquidtight Flexible Steel Conduit 24-25
- Non-UL Extreme Temperature..... 26-27
- UL Orange Type LFNC-A..... 28-29
- UL NSF® 169 Component for Splash Zones,
Type LFMC..... 30-31
- Notes 32

LIQUID-TUFF™**UL Hi-Low Temperature Liquidtight Flexible Steel Conduit, Type LFMC****Scope**

This specification covers AFC Cable Systems, Inc. UL Listed LIQUID-TUFF™ Hi-Low Liquidtight Flexible Steel Conduit designed for use as a raceway for power, control and communication cables in accordance with Article 350 of the National Electrical Code. The product is Underwriters Laboratories Inc. (UL) Listed for 105°C (221°F) in a dry location, 60°C (140°F) in a wet location and 70°C (158°F) in an oily location. It is also UL Listed in all trade sizes for direct burial, outdoor use and sunlight resistance. THE LIQUID-TUFF™ HI-LOW IS UL LISTED FOR -55°C (-67°F) LOW TEMPERATURE APPLICATIONS. This Liquidtight Flexible Steel Conduit is manufactured and tested in accordance with Underwriters Laboratories Inc. Standard UL 360. The product carries the UL Listing Mark.

Construction

The Hi-Low Liquidtight Flexible Steel Conduit shall be formed from a zinc coated galvanized low carbon steel strip having a uniform width and thickness. The construction shall be in accordance with UL 360. The finished Hi-Low Type LFMC dimensions shall be in accordance with Table 5.1 of UL 360 which is summarized in Table 3.

Jacket – PVC

A rugged moisture, oil and sunlight resistant polyvinyl chloride (PVC) jacket shall be applied directly over the flexible metal conduit with a wall thickness in accordance with Table 4.1 of UL 360 which is summarized in Table 2. Jacket: Gray. Additional colors available upon request.

Grounding

Permanent circuit ground protection is provided through the continuous bonding strip built into the conduit core in sizes 3/8" through 1-1/4". A separate grounding conductor is required by the NEC® for trade sizes 1-1/2" and larger.

Markings

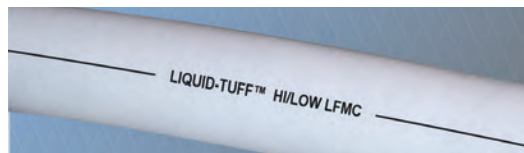
The surface of the outer jacket shall be clearly marked with a legible print legend in compliance with UL 360.

Performance Tests

In accordance with UL 360, the completed LIQUID-TUFF™ Hi-Low Liquidtight Flexible Steel Conduit shall meet all of the performance requirements outlined in Appendix A. Reference.

Description

- Superior temperature ratings
- Hot dipped zinc galvanized low carbon steel core
- UL bonding strip 3/8" – 1-1/4" for grounding
- Sunlight resistant
- Flame retardant PVC jacket – Gray

**Temperature Rating**

- 105°C (221°F) Dry
- 60°C (140°F) Wet
- 70°C (158°F) Oil resistant
- -55°C (-67°F) Low temperature

Applications

- NEC® 350 Liquidtight Flexible Metal Conduit Type LFMC Machine tool wiring applications
- Suitable for Wet Locations
- Suitable for Direct Burial in earth
- Suitable for Concrete Embedment
- Suitable for exposure to Sunlight and Weather
- Suitable for installation at low temperatures
- Suitable for grounding in 3/8 to 1 1/4 trade sizes per NEC® 250.118(6)
- Suitable for Flexible Connections in Hazardous Locations: Class I Div 2 NEC 501.10(B)(2)(4), Class II Div 1 NEC 502.10(A)(2)(2), Class II Div 2 NEC 502.10(B)(2), Class III Div 1 NEC 503.10(A)(3)(2) and Class III Div 2 NEC 503.10(B).
- Suitable for Raised Computer Room Floors per NEC 645.5(E)(2)
- Suitable for Service Entrance Wiring up to 6 feet per NEC 230.43(15)
- Suitable for feeders and services where flexible connections are required in Floating Buildings per NEC 553.7(B)
- Suitable for Marinas and Boatyards per NEC 555.13(A)(1)
- Suitable for Electric signs and Outdoor Lighting per NEC 600.31(A)(1) and 600.32(A)(1)
- Suitable for Flexible Connections for hoists and cranes per NEC 610.11(C)
- Suitable for wiring Elevators, Dumbwaiters, Escalators, Moving Walks, Platforms and Stairway Chairlifts per NEC 620.21
- Suitable for Motors for Permanently Installed Pools where Flexible Connections are required per NEC 680.21(A)(3)
- Suitable for Spas and Hot Tubs where Flexible Connections are required per NEC 680.42(A)(1)
- Suitable for feeders for Natural and Artificially Made Bodies of Water where Flexible Connections are required per NEC 682.13
- Suitable for Solar Photovoltaic (PV) Systems per NEC 690.31(A)
- Suitable for Fire Pump Wiring per NEC 695.6(D)
- Suitable for Electric Fire Pump Control Wiring per NEC 695.14(E)

Ratings

- Underwriters Laboratories Inc. Standard: UL 360 File: E26540
- UL LISTED for 105°C (221°F)
- UL LISTED for -55°C (67°F)
- NFPA 70 NEC® Article 350
- UL LISTED in all Trade Sizes for DIRECT BURIAL which includes Concrete Encasement
- Conduit in Trade Sizes 1 1/2 and larger require an equipment grounding conductor per NEC 350.60

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS			
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches)		Internal Diameter (min/max) inches	Bend Radius (inches)
						Over Conduit (min/max)	Over Jacket (min/max)		
6901-30-00	3/8	12	100'	—	25	0.594/0.614	0.690/0.710	0.484/0.504	2
6902-30-00	1/2	16	100'	—	31	0.732/0.765	0.820/0.840	0.622/0.642	3.25
6902-45-00	1/2	16	—	500'	31	0.732/0.765	0.820/0.840	0.622/0.642	3.25
6902-60-00	1/2	16	—	1000'	31	0.732/0.765	0.820/0.840	0.622/0.642	3.25
6903-30-00	3/4	21	100'	—	48	0.930/0.960	1.030/1.050	0.820/0.840	4.25
6903-45-00	3/4	21	—	500'	48	0.930/0.960	1.030/1.050	0.820/0.840	4.25
6903-60-00	3/4	21	—	1000'	48	0.930/0.960	1.030/1.050	0.820/0.840	4.25
6904-30-00	1	27	100'	—	80	1.201/1.226	1.290/1.315	1.041/1.066	6.5
6904-41-00	1	27	—	400'	80	1.201/1.226	1.290/1.315	1.041/1.066	6.5
6905-24-00	1-1/4	35	50'	—	105	1.540/1.570	1.630/1.660	1.380/1.410	8
6906-24-00	1-1/2	41	50'	—	110	1.735/1.770	1.865/1.900	1.575/1.600	9
6907-24-00	2	53	50'	—	147	2.180/2.215	2.340/2.375	2.020/2.045	11.12
6908-22-00	2-1/2	63	25'	—	172	2.640/2.675	2.840/2.875	2.480/2.505	14.62
6909-22-00	3	78	25'	—	200	3.295/3.335	3.460/3.500	3.070/3.100	17.5
6910-22-00	3-1/2	91	25'	—	235	3.720/3.789	3.960/4.000	3.500/3.540	20
6911-22-00	4	103	25'	—	256	4.220/4.280	4.460/4.500	4.000/4.040	24

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Review NEC® 350.60 and 250.118(6) for grounding requirements.

Reference Standards

UL 360	Standard for Liquidtight Flexible Metal Conduit
UL 514B	UL Standard for Conduit, Tubing and Cable Fittings
NFPA 70	National Electric Code (NEC) Articles 250, 350, 390, 501, 502, 503, 504, 511, 620, 645, 680 and 690
NEMA RV 3	Application and Installation Guidelines for Flexible and Liquidtight Flexible Metal Conduits

Table 3. Conduit Diameters — Acceptable Internal and External Diameters

Conduit Size		Internal Diameter (in.)		Over Jacket (in.)	
Trade Size (in.)	Metric Designator	Min.	Max.	Min.	Max.
3/8	12	0.484	0.504	0.690	0.710
1/2	16	0.622	0.642	0.820	0.840
3/4	21	0.820	0.840	1.030	1.050
1	27	1.041	1.066	1.290	1.315
1-1/4	35	1.380	1.410	1.630	1.660
1-1/2	41	1.575	1.600	1.865	1.900
2	53	2.020	2.045	2.340	2.375
2-1/2	63	2.480	2.505	2.840	2.875
3	78	3.070	3.100	3.460	3.500
3-1/2	91	3.500	3.540	3.960	4.000
4	103	4.000	4.040	4.460	4.500

Table 2. Jacket Thickness

Conduit Trade		Min. Average Thickness of Jacket (inches)
Trade Size	Metric Designator	
3/8	12	0.030
1/2	16	0.030
3/4	21	0.035
1	27	0.035
1-1/4	35	0.035
1-1/2	41	0.040
2	53	0.040
2-1/2	63	0.050
3	78	0.050
3-1/2	91	0.060
4	103	0.060

Appendix A

UL Performance Tests

Resistance and High Current	Flexibility	Mechanical Water Absorption
Fault Current	Low Temperature Flexibility	Moisture Penetration
Impact	Zinc Coating	Sunlight Resistance
Tension	Vertical Flame	Test for Secureness of Fittings
Crushing	Physical Properties	Test for Durability of Ink Printing
Pipe Stiffness	Deformation	

LIQUID-TUFF™**Low Smoke Zero Halogen — LSZH****UL Liquidtight Flexible Metal Conduit Type LPMC****Scope**

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF™ LOW SMOKE ZERO HALOGEN (LSZH) UL Liquidtight Flexible Metal Conduit designed for use as a raceway for power, control and communication cables in accordance with Article 350 of the National Electric Code. The product is intended for applications where limiting smoke and toxic materials of combustion are important considerations. The product is Underwriters Laboratories Inc. (UL) Listed for use at 80°C (176°F) in a dry location, 60°C (140°F) in a wet location and 70°C (158°F) in an oily location. It is also UL Listed for direct burial, outdoor use, sunlight resistance and for -40°C (-40°F) low temperatures applications. UL Listed Liquidtight Flexible Metal Conduit is manufactured and tested in accordance with Underwriters Laboratories Inc. Standard UL 360. The product carries the UL Listing Mark. Underwriters Laboratories Inc. does not list any manufacturers Liquidtight Flexible Metal Conduit as being low smoke zero halogen.

Construction

The LIQUID-TUFF™ LSZH Liquidtight Flexible Metal Conduit shall be formed from zinc coated galvanized low carbon steel strip having a uniform width and thickness. There shall be a continuous bonding strip built into the conduit core for the 3/8 through 1-1/4 trade sizes. The construction shall be in accordance with the UL 360 Standard. The Low Smoke Zero Halogen designation shall be based upon testing to ASTM® E162 – Flame Spread Index, ASTM® E662 – Smoke Density Generation and Bombardier SMP-800C – Toxic Gas Generation. The finished LIQUID-TUFF™ LSZH Liquidtight Flexible Metal Conduit dimensions shall be in accordance with Table 5.1 of UL 360 which is summarized in Table 3.

Jacket – TPU

A rugged low-smoke, moisture, oil, sunlight resistant and flame retardant thermoplastic polyurethane jacket shall be applied directly over the flexible metal conduit. The physical properties of the jacket material shall comply with the UL 360 Standard. The Low Smoke Zero Halogen jacket shall be tested to and comply with ASTM® E162 – Flame Spread Index, ASTM® E662 – Smoke Density Generation and Bombardier SMP-800C – Toxic Gas Generation. The test results are summarized in Table 1. Underwriters Laboratories Inc. (UL) does not list any manufacturers jacket compound as being low smoke zero halogen. The jacket wall thickness shall be in accordance with Table 4.1 of UL 360 which is summarized in Table 2. Jacket: Black.

*Additional colors available upon request.

Grounding

Permanent circuit ground protection is provided through the continuous bonding strip built into the conduit core in trade sizes 3/8 through 1-1/4. A separate grounding conductor is required by the NEC® for all trade sizes 1-1/2 and larger.

Markings

The surface of the outer jacket shall be clearly marked with a legible print legend in compliance with the UL 360 Standard.

Performance Tests

In accordance with UL 360, the completed LIQUID-TUFF™ LSZH Liquidtight Flexible Metal Conduit shall meet all of the performance requirements outlined in Appendix A.

**Description**

- Low smoke, zero halogen raceway
- Low toxicity generation characteristics
- Hot dipped zinc galvanized low carbon steel core
- Excellent temperature ratings
- Black thermoplastic polyurethane jacket
- UL bonding strip 3/8" – 1-1/4" for grounding
- Sunlight resistant
- Flame retardant TPU jacket

Temperature Rating

- 80°C (176°F) DRY
- 60°C (140°F) WET
- 70°C (158°F) OIL RESISTANT
- -40°C (-40°F) LOW TEMPERATURE

Applications

- NEC® 350 Liquidtight Flexible Metal Conduit Type LPMC
- Suitable for Wet Locations
- Suitable for Direct Burial in earth
- Suitable for Concrete Embedment
- Suitable for exposure to Sunlight and Weather
- Suitable for grounding in 3/8 to 1 1/4 trade sizes per NEC® 250.118(6)
- Suitable for Service Entrance Wiring up to 6 feet per NEC® 230.43(15)
- Suitable for connections to Cabinets and Wall Outlets in Underfloor Raceways per NEC® 390.15
- Suitable for use in Cable Trays per NEC® 392.10(A) and Table 392.10(A) Wiring Methods
- Suitable for Flexible Connections in Hazardous Locations: Class I Div 2 NEC® 501.10(B) (2)(4), Class II Div 1 NEC® 502.10(A)(2)(2), Class II Div 2 NEC® 502.10(B)(2), Class III Div 1 NEC® 503.10(A)(3)(2) and Class III Div 2 NEC® 503.10(B)
- Suitable for Wiring in Spaces Above Class I Locations per NEC® 511.7(A)(1)
- Suitable for Raised Computer Room Floors per NEC® 645.5(E)(2)
- Suitable for use for feeders and services where flexible connections are required in Floating Buildings per NEC® 553.7(B)
- Suitable for Marinas and Boatyards per NEC® 555.13(A)(1)
- Suitable for Electric Signs and Outdoor Lighting per NEC® 600.31(A)(1) and 600.32(A)(1)
- Suitable for Flexible Connections for hoists and cranes per NEC® 610.11(C)
- Suitable for wiring Elevators, Dumbwaiters, Escalators, Moving Walks, Platforms and Stairway Chairlifts per NEC® 620.21
- Suitable for Motors for Permanently Installed Pools where Flexible Connections are required per NEC® 680.21(A)(3)
- Suitable for Spas and Hot Tubs where Flexible Connections are required per NEC® 680.42(A)(1)
- Suitable for feeders for Natural and Artificially Made Bodies of Water where Flexible Connections are required per NEC® 682.13
- Suitable for Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Suitable for Fire Pump Wiring per NEC® 695.6(D)
- Suitable for Electric Fire Pump Control Wiring per NEC® 695.14(E)
- Suitable for non-plenum applications where reduced smoke and toxic materials of combustion is required

References & Ratings

- Underwriters Laboratories Inc. Standard: UL 360 File: E26540
- NFPA 70 NEC® Article 350
- UL Listed in all Trade Sizes for Direct Burial which includes Concrete Encasement
- Conduit in Trade Sizes 1 ½ and larger require an equipment grounding conductor per NEC® 350.60
- Compound meets UL 94 with a V-0 Rating and No Flaming Drips
- Meets the requirements of the UL 360 Vertical Flame Test
- Meets the requirements of ASTM® E 162 Flame Spread Index passing with No Flaming Drips
- Meets the requirements of ASTM® E 662 Flaming and Non-Flaming Smoke Generation passing with No Flaming Drips
- Meets Bombardier SMP-800C requirements for Toxic Gas Generation

Reference Standards

UL 360	Standard for Liquidtight Flexible Metal Conduit
UL 514B	Standard for Conduit, Tubing and Cable Fittings
UL 94	Standard Tests for Flammability of Plastic Materials for Parts in Devices and Appliances
NFPA 70	National Electric Code (NEC®) Articles 250, 230, 350, 390, 392, 501, 502, 503, 511, 553, 555, 600, 610, 620, 645, 680, 682, 690 and 695
NEMA RV 3	Application and Installation Guidelines for Flexible and Liquidtight Flexible Metal Conduits
ASTM® E162	Standard Test Method for Surface Flammability
ASTM® E 662	Standard Test Method for Specific Optical Density
SMP 800-C	Bombardier Toxic Gas Generation

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Approx. Reel Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches) Over Jacket (min/max)	Internal Diameter (min/max) inches	Bend Radius (inches)
6701-30-00	3/8	12	100'	—	24	0.690/0.710	0.484/0.504	2
6702-30-00	1/2	16	100'	—	31	0.820/0.840	0.622/0.642	3.25
6702-45-00	1/2	16	—	500'	31	0.820/0.840	0.622/0.642	3.25
6702-60-00	1/2	16	—	1000'	31	0.820/0.840	0.622/0.642	3.25
6703-30-00	3/4	21	100'	—	47	1.030/1.050	0.820/0.840	4.25
6703-45-00	3/4	21	—	500'	47	1.030/1.050	0.820/0.840	4.25
6703-60-00	3/4	21	—	1000'	47	1.030/1.050	0.820/0.840	4.25
6704-30-00	1	27	100'	—	78	1.290/1.315	1.041/1.066	6.5
6704-41-00	1	27	—	400'	78	1.290/1.315	1.041/1.066	6.5
6705-24-00	1-1/4	35	50'	—	102	1.630/1.660	1.380/1.410	8
6705-40-00	1-1/4	35	—	200'	102	1.630/1.660	1.380/1.410	8
6705-47-00	1-1/4	35	—	750'	102	1.630/1.660	1.380/1.410	8
6706-24-00	1-1/2	41	50'	—	107	1.865/1.900	1.575/1.600	9
6707-24-00	2	53	50'	—	144	2.340/2.375	2.020/2.045	11.12
6708-22-00	2-1/2	63	25'	—	168	2.840/2.875	2.480/2.505	14.62
6709-22-00	3	78	25'	—	200	3.460/3.500	3.070/3.100	17.5
6710-22-00	3-1/2	91	25'	—	235	3.960/4.000	3.500/3.540	20
6711-22-00	4	103	25'	—	256	4.460/4.500	4.000/4.040	24

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.

Table 1. LIQUID-TUFF™ LSZH Combustion and Flammability Properties

Property	Test	Results
Vertical Burn (Material)	UL 94	UL Listed: V-0 Rating No Flaming Drips
Vertical Burn (Conduit)	UL 360	UL Listed: Passed
Oxygen Index % (Material)	ASTM® D 2863	25%
Flame Spread Index	ASTM® E-162	Passed No Flaming Drips
Smoke Generation (Flaming)	ASTM® E662 (NFPA-258)	Ds=13 @ 1.5 min Ds=57 @ 4.0 min No Flaming Drips
Smoke Generation (Non-flaming)	ASTM® E662 (NFPA-258)	Ds=1 @ 1.5 min Ds=8 @ 4.0 min No Flaming Drips
Toxic Gas Generation	Bombardier SMP-800C	Pass

Testing performed by independent test laboratory. Test results available upon request.

Table 2. Jacket Thickness

Conduit Trade		Min. Average Thickness of Jacket (inches)
Trade Size	Metric Designator	
3/8	12	0.030
1/2	16	0.030
3/4	21	0.035
1	27	0.035
1-1/4	35	0.035
1-1/2	41	0.040
2	53	0.040
2-1/2	63	0.050
3	78	0.050
3-1/2	91	0.060
4	103	0.060

Appendix A**UL Performance Tests**

Resistance and High Current	Flexibility	Mechanical Water Absorption
Fault Current	Low Temperature Flexibility	Moisture Penetration
Impact	Zinc Coating	Sunlight Resistance
Tension	Vertical Flame	Test for Secureness of Fittings
Crushing	Physical Properties	Test for Durability of Ink Printing
Pipe Stiffness	Deformation	

Table 3. Conduit Diameters — Acceptable Internal and External Diameters

Conduit Size		Internal Diameter (in.)		Over Jacket (in.)	
Trade Size (in.)	Metric Designator	Min.	Max.	Min.	Max.
3/8	12	0.484	0.504	0.690	0.710
1/2	16	0.622	0.642	0.820	0.840
3/4	21	0.820	0.840	1.030	1.050
1	27	1.041	1.066	1.290	1.315
1-1/4	35	1.380	1.410	1.630	1.660
1-1/2	41	1.575	1.600	1.865	1.900
2	53	2.020	2.045	2.340	2.375
2-1/2	63	2.480	2.505	2.840	2.875
3	78	3.070	3.100	3.460	3.500
3-1/2	91	3.500	3.540	3.960	4.000
4	103	4.000	4.040	4.460	4.500



Built to Protect and Defend.

AFC Liquid-Tuff™ Conduits

Whether you need to protect wiring from extreme temperatures, harsh environmental conditions, or halogen free requirements, AFC has the right solution for your job. This completely re-engineered line of industrial and commercial liquid-tight flexible metal and non-metallic conduits offer variety, strength, and flexibility to shield wiring in any condition. **Learn more at afcweb.com**



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LIQUID-TUFF™**Low Smoke Zero Halogen — LSZH-VF
Non-UL Liquidtight Flexible Metal Conduit****Scope**

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF™ Non-UL LOW SMOKE ZERO HALOGEN (LSZH) Liquidtight Flexible Metal Conduit designed for use where limiting smoke and toxic materials of combustion are important considerations. The product is intended for use at 80°C (176°F) in a dry location, 60°C (140°F) in a wet location and 70°C (158°F) in an oily location. It is also acceptable for outdoor use at -40°C (-40°F) low temperatures and is sunlight resistant. This Liquidtight Flexible Metal Conduit is manufactured and tested in accordance with generally accepted industry practices. The product is designed to be used for specific applications where Underwriters Laboratories Inc. (UL) or other agency approvals are not required.

Construction

The LIQUID-TUFF™ LSZH Liquidtight Flexible Metal Conduit shall be formed from zinc coated galvanized low carbon steel strip having a uniform width and thickness. The Low Smoke Zero Halogen designation shall be based upon testing to ASTM® E162 – Flame Spread Index, ASTM® E662 – Smoke Density Generation and Bombardier SMP-800C – Toxic Gas Generation. The finished LIQUID-TUFF™ LSZH Liquidtight Flexible Metal Conduit dimensions shall be in accordance with Table 3.

Jacket – TPU

A rugged low-smoke, moisture, oil, sunlight resistant and flame retardant thermoplastic polyurethane jacket shall be applied directly over the flexible metal conduit. The Low Smoke Zero Halogen jacket shall be tested to and comply with ASTM® E162 – Flame Spread Index, ASTM® E662 – Smoke Density Generation and Bombardier SMP-800C – Toxic Gas Generation. The test results are summarized in Table 1. In addition the jacket shall comply with Table 2 of this specification. Standard Jacket Color: Black.

*Additional colors available upon request.

Grounding

A separate grounding conductor is required for all trade sizes.

Markings

The surface of the outer jacket shall be clearly marked with the applicable print legend.

Performance Tests

The completed LIQUID-TUFF™ LSZH Non-UL Liquidtight Flexible Metal Conduit shall meet all of the performance requirements outlined in Appendix A.

**Description**

- Low smoke, zero halogen raceway
- Low toxicity generation characteristics
- Hot dipped zinc galvanized low carbon steel core
- Excellent temperature ratings
- Black thermoplastic polyurethane jacket
- Sunlight resistant
- Flame retardant TPU jacket

Temperature Rating

- 80°C/176°F Dry
- 60°C/140°F Wet
- 70°C/158°F Oil resistant
- -40 C /40 F Low temperatures

Applications

- Wherever limiting toxic material of combustion is needed

References & Ratings

- Non-UL core
- ASTM® E 162 Flame Spread Index
- ASTM® E 662 Smoke Density Generation
- Bombardier SMP-800C Toxic Gas Generation
- UL 94 Tests for Flammability of Plastic Materials for Parts
- Made in USA of US and/or imported materials

Reference Standards

ASTM® E 162	Flame Spread Index
ASTM® E 662	Smoke Density Generation
Bombardier SMP-800C	Toxic Gas Generation
UL 94	Tests for Flammability of Plastic Materials for Parts

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches) Over Jacket (min/max)	Internal Diameter (min/max) inches	Bend Radius (inches)
6751-30-00	3/8	12	100'	—	21	0.690/0.710	0.484/0.504	2
6752-30-00	1/2	16	100'	—	25	0.820/0.840	0.622/0.642	3.25
6752-45-00	1/2	16	—	500'	25	0.820/0.840	0.622/0.642	3.25
6752-60-00	1/2	16	—	1000'	25	0.820/0.840	0.622/0.642	3.25
6753-30-00	3/4	21	100'	—	32	1.030/1.050	0.820/0.840	4.25
6753-45-00	3/4	21	—	500'	32	1.030/1.050	0.820/0.840	4.25
6753-60-00	3/4	21	—	1000'	32	1.030/1.050	0.820/0.840	4.25
6754-30-00	1	27	100'	—	43	1.290/1.315	1.041/1.066	6.5
6754-41-00	1	27	—	400'	43	1.290/1.315	1.041/1.066	6.5
6755-24-00	1-1/4	35	50'	—	57	1.630/1.660	1.380/1.410	8
6755-40-00	1-1/4	35	—	200'	57	1.630/1.660	1.380/1.410	8
6755-47-00	1-1/4	35	—	750'	57	1.630/1.660	1.380/1.410	8
6756-24-00	1-1/2	41	50'	—	85	1.865/1.900	1.575/1.600	9
6757-24-00	2	53	50'	—	112	2.340/2.375	2.020/2.045	11.12
6758-22-00	2-1/2	63	25'	—	116	2.840/2.875	2.480/2.505	14.62

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. **Not listed for grounding.**
Additional trade sizes available up to 4" available upon request

Table 1. LIQUID-TUFF™ LSZH-VF Combustion and Flammability Properties

Property	Test	Results
Vertical Burn (Material)	UL 94	UL Listed: V-O Rating No Flaming Drips
Vertical Burn (Conduit)	UL 360	Passed
Oxygen Index % (Material)	ASTM® D 2863	25%
Flame Spread Index	ASTM® E-162	Passed No Flaming Drips
Smoke Generation (Flaming)	ASTM® E662 (NFPA-258)	Ds=13 @ 1.5 min Ds=57 @ 4.0 min No Flaming Drips
Smoke Generation (Non-flaming)	ASTM® E662 (NFPA-258)	Ds=1 @ 1.5 min Ds=8 @ 4.0 min No Flaming Drips
Toxic Gas Generation	Bombardier SMP-800C	Pass

Testing performed by independent test laboratory. Test results available upon request.

Appendix A

Performance Tests

Flexibility	Moisture Penetration
Low Temperature Flexibility	Mechanical Water Absorption
Vertical Flame	Sunlight Resistance
Physical Properties	Test for Durability of Ink Printing
Deformation	

Table 2. Jacket Thickness

Conduit Trade		Min. Average Thickness of Jacket (inches)
Trade Size	Metric Designator	
3/8	12	0.030
1/2	16	0.030
3/4	21	0.035
1	27	0.035
1-1/4	35	0.035
1-1/2	41	0.040
2	53	0.040
2-1/2	63	0.050

Additional trade sizes available up to 4" available upon request

Table 3. Conduit Diameters — Acceptable Internal and External Diameters

Conduit Size		Internal Diameter (in.)		Over Jacket (in.)	
Trade Size (in.)	Metric Designator	Min.	Max.	Min.	Max.
3/8	12	0.484	0.504	0.690	0.710
1/2	16	0.622	0.642	0.820	0.840
3/4	21	0.820	0.840	1.030	1.050
1	27	1.041	1.066	1.290	1.315
1-1/4	35	1.380	1.410	1.630	1.660
1-1/2	41	1.575	1.600	1.865	1.900
2	53	2.020	2.045	2.340	2.375
2-1/2	63	2.480	2.505	2.840	2.875

LIQUID-TUFF™**Non-UL Oil Resistant/High Temperature Liquidtight Flexible Steel Conduit****Scope**

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF™ Non-UL Oil Resistant/High Temperature Liquidtight Flexible Steel Conduit designed for use in high temperature oily applications. The product is intended for use at 105°C (221°F) in a dry location, 60°C (140°F) in a wet location, 70°C (158°F) in an oily location and at -26°C (-15°F) in a low temperature application. The product is rated for outdoor and sunlight resistant use in dark colors.

The product is designed to be used for specific applications where Underwriters Laboratories Inc. (UL) or other agency approvals are not required.

Construction

Non-UL Oil Resistant/High Temperature Liquidtight Flexible Steel Conduit shall be formed from a zinc coated galvanized low carbon steel strip having a uniform width and thickness. The convolutions of the interlock shall be filled with a fibrous material designed to promote flexibility.

Jacket – PVC

A rugged moisture, oil and sunlight resistant polyvinyl chloride (PVC) jacket shall be applied directly over the flexible metal conduit with a wall thickness in accordance with Table 2. Jacket: Gray

Grounding

A separate grounding conductor is required for all trade sizes.

Markings

The surface of the outer jacket shall be clearly marked with the applicable legible print legend.

Performance Tests

The completed LIQUID-TUFF™ Non-UL Oil Resistant/High Temperature Liquidtight Flexible Steel Conduit shall meet all of the performance requirements outlined in Appendix A.

**Description**

- High-quality PVC jacket for oil resistance and high temperatures – Gray
- Hot dipped zinc galvanized low carbon steel core
- Excellent flexibility
- Non-UL Liquidtight electrical raceway

Temperature Rating

- 105°C/221°F Dry
- 60°C/140°F Wet
- 70°C/158°F Oil resistant
- -26°C/-15°F Low temperature

Applications

- Oily and harsh chemical environments
- UV resistant
- Excellent flexibility
- Industrial applications
- Indoor or outdoor locations
- Provides mechanical protection for conductors

References & Ratings

- Non-UL
- Separate grounding conductor required in all sizes
- Made in USA of US and/or imported materials

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches)	Internal Diameter (min/max) inches	Bend Radius (inches)
						Over Jacket (min/max)		
5901-30-00	3/8	12	100'	—	22	0.690/0.710	0.484/0.504	2
5901-45-00	3/8	12	—	500'	22	0.690/0.710	0.484/0.504	2
5901-60-00	3/8	12	—	1000'	22	0.690/0.710	0.484/0.504	2
5902-30-00	1/2	16	100'	—	26	0.820/0.840	0.622/0.642	3.25
5902-45-00	1/2	16	—	500'	26	0.820/0.840	0.622/0.642	3.25
5902-60-00	1/2	16	—	1000'	26	0.820/0.840	0.622/0.642	3.25
5903-30-00	3/4	21	100'	—	34	1.030/1.050	0.820/0.840	4.25
5903-45-00	3/4	21	—	500'	34	1.030/1.050	0.820/0.840	4.25
5903-60-00	3/4	21	—	1000'	34	1.030/1.050	0.820/0.840	4.25
5904-30-00	1	27	100'	—	46	1.290/1.315	1.041/1.066	6.5
5904-41-00	1	27	—	400'	46	1.290/1.315	1.041/1.066	6.5
5905-24-00	1-1/4	35	50'	—	62	1.630/1.660	1.380/1.410	8
5905-40-00	1-1/4	35	—	200'	62	1.630/1.660	1.380/1.410	8
5906-24-00	1-1/2	41	50'	—	91	1.865/1.900	1.575/1.600	9
5907-24-00	2	53	50'	—	120	2.340/2.375	2.020/2.045	11.12
5908-22-00	2-1/2	63	25'	—	122	2.840/2.875	2.480/2.505	14.62
5909-22-00	3	78	25'	—	148	3.460/3.500	3.070/3.100	17.5
5910-22-00	3-1/2	91	25'	—	202	3.960/4.000	3.500/3.540	20
5911-22-00	4	103	25'	—	255	4.460/4.500	4.000/4.040	24

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. **Not for grounding.**

Table 2. Jacket Thickness

Conduit Trade		Min. Average Thickness of Jacket (inches)
Trade Size	Metric Designator	
3/8	12	0.030
1/2	16	0.030
3/4	21	0.035
1	27	0.035
1-1/4	35	0.035
1-1/2	41	0.040
2	53	0.040
2-1/2	63	0.050
3	78	0.050
3-1/2	91	0.060
4	103	0.060

Table 3. Conduit Diameters — Acceptable Internal and External Diameters

Conduit Size		Internal Diameter (in.)		Over Jacket (in.)	
Trade Size (in.)	Metric Designator	Min.	Max.	Min.	Max.
3/8	12	0.484	0.504	0.690	0.710
1/2	16	0.622	0.642	0.820	0.840
3/4	21	0.820	0.840	1.030	1.050
1	27	1.041	1.066	1.290	1.315
1-1/4	35	1.380	1.410	1.630	1.660
1-1/2	41	1.575	1.600	1.865	1.900
2	53	2.020	2.045	2.340	2.375
2-1/2	63	2.480	2.505	2.840	2.875
3	78	3.070	3.100	3.460	3.500
3-1/2	91	3.500	3.540	3.960	4.000
4	103	4.000	4.040	4.460	4.500

Appendix A

Performance Tests

Flexibility	Moisture Penetration
Low Temperature Flexibility	Mechanical Water Absorption
Vertical Flame	Sunlight Resistance
Physical Properties	

LIQUID-TUFF™**Non-UL Extreme Temperature Liquidtight Flexible Metal Conduit****Scope**

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF™ Non-UL EXTREME TEMPERATURE Liquidtight, Flexible Metal Conduit designed for use where operation at a high temperature is required. The product is appropriate for use at 150°C continuous use in a dry location, 60°C in a wet location or 70°C in an oily location. The LIQUID-TUFF™ EXTREME TEMPERATURE jacket material is halogen-free, meets UL 94HB flammability requirements and has a low temperature brittle point of -60°C (-76°F).

The product is designed to be used for specific applications where Underwriters Laboratories Inc. (UL) or other agency approvals are not required.

Construction

The Non-UL EXTREME TEMPERATURE Liquidtight, Flexible Steel Conduit core shall be formed into a very flexible interlocked steel conduit from a zinc coated galvanized low carbon steel strip having a uniform width and thickness. The convolutions of the interlock shall be filled with a fibrous material designed to promote flexibility.

Jacket – TPR

A rugged moisture, oil and ozone resistant thermoplastic elastomer jacket shall be extruded directly over the interlocked very flexible steel core. The jacket is halogen free, has a UL 94HB Flammability Rating and has a -60°C (-76°F) Low Temperature Brittle Point when tested in accordance with ASTM® D746. The wall thickness is in conformance with Table 1. The Black Jacket complies with 720-Hour Xenon-Arc sunlight/weather resistance test - ASTM® D2565 and ASTM® G155.

Grounding

A separate grounding conductor is required for all trade sizes.

Markings

The outer surface of the jacket shall be clearly marked with the applicable print legend.

Performance Tests

The completed LIQUID-TUFF™ Non-UL EXTREME TEMPERATURE Liquidtight Flexible Steel Conduit shall meet all of the applicable performance requirements.

**Description**

- High quality thermoplastic rubber jacket – Black
- Ability to withstand extremes in temperature
- Hot dipped zinc galvanized low carbon steel core
- Halogen free
- Oil and ozone resistant
- Superior flexibility

Temperature Rating

- 150°C/302°F Dry - Continuous use
- 70°C Oil and Wet
- -60°C/-76°F Low temperature brittle point

Applications

- Resists extremes in temperature
- Very high operating temperatures
- For location requiring halogen free conduits
- Industrial applications
- Indoor or outdoor locations
- Provides mechanical protection for conductors
- Superior UV and Ozone resistance

References & Ratings

- Non-UL
- Meets UL 94HB flammability requirements
- Meets ASTM® D746 low temperature brittle point -60°/-76°F
- Separate grounding conductor is required for all trade sizes
- Made in USA of US and/or imported materials

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches)	Internal Diameter (min/max) inches	Bend Radius (inches)
						Over Jacket (min/max)		
6801-30-00	3/8	12	100'	—	19	0.690/0.710	0.484/0.504	2
6802-30-00	1/2	16	100'	—	23	0.820/0.840	0.622/0.642	3.25
6802-45-00	1/2	16	—	500'	23	0.820/0.840	0.622/0.642	3.25
6802-60-00	1/2	16	—	1000'	23	0.820/0.840	0.622/0.642	3.25
6803-30-00	3/4	21	100'	—	29	1.030/1.050	0.820/0.840	4.25
6803-45-00	3/4	21	—	500'	29	1.030/1.050	0.820/0.840	4.25
6803-60-00	3/4	21	—	1000'	29	1.030/1.050	0.820/0.840	4.25
6804-30-00	1	27	100'	—	40	1.290/1.315	1.041/1.066	6.5
6804-41-00	1	27	—	400'	40	1.290/1.315	1.041/1.066	6.5
6805-24-00	1-1/4	35	50'	—	52	1.630/1.660	1.380/1.410	8
6805-40-00	1-1/4	35	—	200'	52	1.630/1.660	1.380/1.410	8
6806-24-00	1-1/2	41	50'	—	81	1.865/1.900	1.575/1.600	9
6807-24-00	2	53	50'	—	106	2.340/2.375	2.020/2.045	11.12
6808-22-00	2-1/2	63	25'	—	108	2.840/2.875	2.480/2.505	14.62
6809-22-00	3	78	25'	—	130	3.460/3.500	3.070/3.100	17.5
6810-22-00	3-1/2	91	25'	—	178	3.960/4.000	3.500/3.540	20
6811-22-00	4	103	25'	—	225	4.460/4.500	4.000/4.040	24

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. **Not for grounding.**

Table 1. Jacket Thickness

Conduit Trade		Min. Average Thickness of Jacket (inches)
Trade Size	Metric Designator	
3/8	12	0.030
1/2	16	0.030
3/4	21	0.035
1	27	0.035
1-1/4	35	0.035
1-1/2	41	0.040
2	53	0.040
2-1/2	63	0.050
3	78	0.050
3-1/2	91	0.060
4	103	0.060

LIQUID-TUFF™**UL Liquidtight Flexible Nonmetallic Conduit Type A
Orange Type LFNC-A****Scope**

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF™ Layered Liquidtight Flexible Nonmetallic Conduit, designed for use in wet, dry or oily locations as a flame resistant, Nonmetallic raceway for power, control and communications cables where repetitive motion and constant flexing is required. It is intended for applications where abrasion and physical abuse may occur. It complies with Article 356 of the NEC® regarding layered conduit Type LFNC-A. The product is UL Listed for 80°C (176°F) in a dry location, 60°C (140°F) in a wet location and 60°C (140°F) in a oily location. It is also UL Listed through 2-inch trade sizes for outdoor use and sunlight resistance. This Liquidtight Flexible Nonmetallic Conduit is manufactured and tested in accordance with Harmonized Underwriters Laboratories Inc. Standard UL 1660. The product carries the UL Listing Mark and CSA Certification.

Construction

Liquidtight Flexible Nonmetallic Conduit Type LFNC-A is a layered raceway of circular cross section with a smooth flexible polyvinyl chloride (PVC) inner layer with a reinforcing layer covered with a flexible polyvinyl chloride (PVC) jacket. The wall thicknesses and dimensions of the layered conduit shall comply with Table 1 of harmonized UL 1660/CSA C22.2 No. 227.2.1 of UL 1660 which is summarized in Table 1. Color: Orange

Grounding

A separate Grounding conductor is required by both the National Electrical Code and Canadian Electrical Code for all trade sizes.

Markings

The outer surface of the conduit shall be clearly marked with a legible print legend in accordance with harmonized UL 1660/CSA C22.2 No. 227.2.1.

Performance Tests

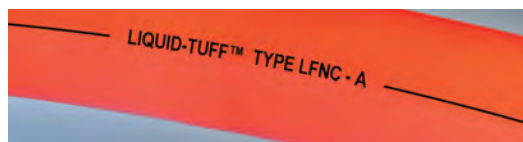
The completed LIQUID-TUFF™ Liquidtight Flexible Nonmetallic Conduit Type A shall meet all of the performance requirements contained in UL 1660 outlined in Appendix A.

Description

- Layered Type A construction per NEC® 356.2(1)
- Nylon reinforced braid between two layers of PVC for strength and flexibility
- Flame retardant compound
- Sunlight resistant
- Oil resistant
- Mild acid resistance
- Non-conductive raceway

Temperature Rating

- 80°C (176°F) DRY
- 60°C (140°F) WET
- 60°C (140°F) OIL

**Applications**

- NEC® 356.2(1) Liquidtight Flexible Nonmetallic Conduit Type LFNC-A
- Suitable for Wet Locations
- Suitable for outdoor use to include exposure to Sunlight and Weather
- Suitable for Service Entrance Wiring per NEC® 230.43(16)
- Suitable for connections to Cabinets and Wall Outlets in Underfloor Raceways per NEC® 390.15
- Suitable for use in Cable Trays per NEC® 392.10(A) and Table 392.10(A) Wiring Methods
- Suitable for Flexible Connections in Hazardous Locations: Class I Div 2 NEC® 501.10(B)(2)(5), Class II Div 1 NEC® 502.10(A)(2)(3), Class II Div 2 NEC® 502.10(B)(2), Class III Div 1 NEC® 503.10(A)(3)(3) and Class III Div 2 NEC® 503.10(B).
- Suitable for Wiring in Spaces Above Class I Locations per NEC® 511.7(A)(1).
- Suitable for use in Agricultural Buildings where Flexible Connections are required per NEC® 547.5(D)
- Suitable for Marinas and Boatyards per NEC® 555.13(A)(1)
- Suitable for Electric Signs and Outdoor Lighting for Neon Secondary-Circuit Wiring of 1000V or Less per NEC® 600.31(A)
- Suitable for Electric Signs and Outdoor Lighting for Neon Secondary-Circuit Wiring of More Than 1000V per NEC® 600.32(A)(1)
- Suitable for Flexible Connections for Hoists and Cranes per NEC® 610.11(C)
- Suitable for wiring Elevators, Dumbwaiters, Escalators, Moving Walks, Platforms and Stairway Chairlifts per NEC® 620.21
- Suitable for Raised Computer Room Floors per NEC® 645.5(E)(2)
- Suitable for Motors for Permanently Installed Pools where Flexible Connections are required per NEC® 680.21(A)(3)
- Suitable for Spas and Hot Tubs where Flexible Connections are required per NEC® 680.42(A)(1)
- Suitable for feeders for Natural and Artificially Made Bodies of Water where Flexible Connections are required per NEC® 682.13
- Suitable for Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Suitable for applications where constant flexing motion is required

Ratings

- Underwriters Laboratories Inc. Standard: UL 1660 File: E123464
- CSA Group: Standard: C22.2 No. 227.2.1 File: 69271
- NFPA 70 NEC® Article 356
- Canadian Electric Code (CEC) Part I Clause 12-1300
- All Trade Sizes require an equipment grounding conductor per NEC® 356.60
- All Trade Sizes require a bonding conductor per CEC Rule 12-1306

Reference Standards	
UL 1660/ CSA C22.2 No. 227.2.1	Harmonized Standard for Liquidtight Flexible Nonmetallic Conduit
UL 514B	Standard for Conduit, Tubing and Cable Fittings
NFPA 70	National Electric Code (NEC®) Articles 250, 356, 390, 501, 502, 503, 504, 511, 620, 645, 680 and 690

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS			
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	Min. Average Wall Thickness	Internal Diameter (min/max) inches	External Diameter (min/max) inches	Bend Radius (inches)
6501-30-00	3/8	12	100'	—	14	0.045	0.475/0.515	0.745/0.785	2
6502-30-00	1/2	16	100'	—	16	0.045	0.610/0.650	0.900/0.940	3.25
6502-60-00	1/2	16	—	1000'	16	0.045	0.610/0.650	0.900/0.940	3.25
6503-30-00	3/4	21	100'	—	18	0.050	0.805/0.845	1.140/1.180	4.25
6504-30-00	1	27	100'	—	29	0.050	1.020/1.065	1.400/1.450	6.5
6504-45-00	1	27	—	500'	29	0.050	1.020/1.065	1.400/1.450	6.5
6505-24-00	1-1/4	35	50'	—	40	0.055	1.360/1.405	1.790/1.835	8
6506-24-00	1-1/2	41	50'	—	83	0.055	1.575/1.630	2.035/2.090	9
6507-24-00	2	53	50'	—	140	0.055	2.035/2.090	2.595/2.650	11.1

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.

Table 1.								
Conduit Size		Inside Diameter (in.)		Outside Diameter (in.)		Min. Bend Radius (in.)	Weight lbs./100 ft.	Min. Average Wall Thickness (inches)
Trade Size (in.)	Metric	Min.	Max.	Min.	Max.			
3/8	(12)	0.475	0.515	0.745	0.785	2.0	14	.045
1/2	(16)	0.610	0.650	0.900	0.940	3.25	16	.045
3/4	(21)	0.805	0.845	1.140	1.180	4.25	18	.050
1	(27)	1.020	1.065	1.400	1.450	6.5	29	.050
1-1/4	(35)	1.360	1.405	1.790	1.835	8.0	40	.055
1-1/2	(41)	1.575	1.630	2.035	2.090	9.5	83	.055
2	(53)	2.035	2.090	2.595	2.650	11.1	140	.055

Appendix A		
UL Performance Tests		
Physical Properties: • Original Tensile and Elongation • Air Oven Aging Test • Oil Immersion Test • Deformation	Cold Impact	Durability of Ink Printing
Tension	Secureness of Fittings	Weather Resistance
Flexibility (Low Temperature)	Mechanical Water Absorption	Resistance to Deflection (Crush) Test
Vertical Flame	Moisture Penetration Test	

LIQUID-TUFF™**UL Liquidtight Flexible Steel Conduit, Type LFMC
NSF® 169 Component for Splash Zones****Scope**

This specification covers AFC Cable Systems, Inc. UL Liquid-Tuff™ Liquidtight Flexible Steel Conduit designed for use as a raceway for NSF® 169 Component Special Purpose Food Equipment and Devices, meat packing, restaurants, food processing, poultry packing, pharmaceutical facilities, as well as, power, control and communications cables in accordance with Article 350 of the National Electrical Code. Temperature ranges: 80°C/176°F Dry, 60°C/140°F Wet, 70°C/158°F Oily, -30°C/-22°F Low temperature. PVC jacket designed to inhibit bacteria growth and to withstand 'wash down/splash zones' with bleach agents. This Liquidtight Flexible Steel Conduit is manufactured and tested in accordance with Underwriters Laboratories Inc. Standard UL 360 and carries the UL Listing Mark. It is further certified to NSF® 169 Component, CSA C22.2 Number 56. The product carries the UL Listing Mark, CSA Certification Mark, and NSF® 169 Component Certification Logo.

Construction

The UL Liquidtight Flexible Steel Conduit shall be formed from a zinc coated galvanized low carbon steel strip having a uniform width and thickness. The construction shall be in accordance with UL 360 and NSF® 169 Component. The finished Type LFMC dimensions shall be in accordance with Table 5.1 of UL 360.

Jacket - PVC

White PVC jacket* inhibits bacteria growth. Rugged moisture, oil and sunlight resistant polyvinyl chloride (PVC) jacket shall be applied directly over the flexible metal conduit with a wall thickness in accordance with Table 4.1 of UL 360. May be cleaned without degradation to the jacket with bleaching agents. Jacket Color: Stocked in white

*Additional colors available upon request

Markings

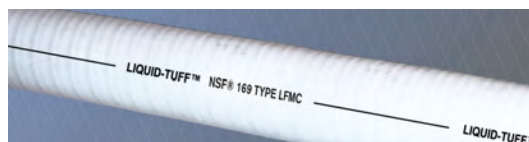
The surface of the outer jacket shall be clearly marked with a legible print legend in compliance with UL 360, CSA C22.2 No. 56 and NSF® 169 Component.

Performance Tests

In accordance with UL 360 and CSA C 22.2 No. 56, the completed UL Liquid-Tuff Liquidtight Flexible Conduit shall meet all of the performance requirements outlined in Appendix A for Type LFMC.

Description

- NSF® 169 Component for "splash zones" in food production areas
- NSF® 169 Component Special Purpose Food Equipment and Devices
- PVC jacket inhibits bacteria growth — color White
- Ease of cleaning/sterilization using bleach — no degradation of jacket
- Flexible rugged moisture, oil & sunlight resistant PVC jacket
- Hot dipped zinc galvanized low carbon steel core
- Excellent temperature range
- UL bonding strip 3/8" — 1-1/4" for grounding

**Temperature Rating**

- 80°C (176°F) DRY
- 60°C (140°F) WET
- 70°C (158°F) OIL
- -30°C (-22°F) LOW TEMPERATURE

Applications & References

- NEC® 350 Liquidtight Flexible Metal Conduit Type LFMC
- Suitable for Wet Locations
- Suitable for Direct Burial in earth
- Suitable for Concrete Embedment
- Suitable for exposure to Sunlight and Weather
- Suitable for Service Entrance Wiring up to 6 feet per NEC® 230.43(15)
- Suitable for grounding in 3/8 to 1 ¼ trade sizes per NEC® 250.118(6)
- Suitable for connections to Cabinets and Wall Outlets in Underfloor Raceways per NEC® 390.15
- Suitable for use in Cable Trays per NEC® 392.10(A) and Table 392.10(A) Wiring Methods
- Suitable for Flexible Connections in Hazardous Locations: Class I Div 2 NEC® 501.10(B)(2)(4), Class II Div 1 NEC® 502.10(A)(2)(2), Class II Div 2 NEC® 502.10(B)(2), Class III Div 1 NEC® 503.10(A)(3)(2) and Class III Div 2 NEC® 503.10(B)
- Suitable for Wiring in Spaces Above Class I Locations per NEC® 511.7(A)(1)
- Suitable for use in Agricultural Buildings where Flexible Connections are required per NEC® 547.5(D)
- Suitable for Marinas and Boatyards per NEC® 555.13(A)(1)
- Suitable for Electric signs and Outdoor Lighting per NEC® 600.31(A)(1) and 600.32(A)(1)
- Suitable for Flexible Connections for hoists and cranes per NEC® 610.11(C)
- Suitable for wiring Elevators, Dumbwaiters, Escalators, Moving Walks, Platforms and Stairway Chairlifts per NEC® 620.21
- Suitable for Raised Computer Room Floors per NEC® 645.5(E)(2)
- Suitable for Motors for Permanently Installed Pools where Flexible Connections are required per NEC® 680.21(A)(3)
- Suitable for Spas and Hot Tubs where Flexible Connections are required per NEC® 680.42(A)(1)
- Suitable for feeders for Natural and Artificially Made Bodies of Water where Flexible Connections are required per NEC® 682.13
- Suitable for Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Suitable for Fire Pump Wiring per NEC® 695.6(D)
- Suitable for Electric Fire Pump Control Wiring per NEC® 695.14(E)
- Suitable for use in "Splash Zones" contiguous to food production and wash down areas as defined in NSF® 51 Component and NSF® 170 Component Standards
- Suitable for food equipment and other devices associated with food production where not in contact with the food

Ratings

- Underwriters Laboratories Inc. Standard: UL 360 File: E26540
- CSA Group: Standard: C22.2 No. 56 File: 51593
- NFPA 70 NEC® Article 350
- Canadian Electric Code (CEC) Part I Clause 12-1300
- UL Listed in all Trade Sizes for Direct Burial which includes Concrete Encasement
- Conduit in Trade Sizes 1 ½ and larger require an equipment grounding conductor per NEC® 350.60
- NSF® International certified as complying with NSF®/ANSI 169 and all applicable requirements

Reference Standards

UL 360	Standard for Liquidtight Flexible Metal Conduit
CSA C22.2 No. 56	Standard for Flexible Metal Conduit and Liquidtight Flexible Metal Conduit
File Reference(s):	UL E26540; CSA 51593
NEC® Articles	NEC® 250, 350, 390, 501.10(B)(2)(4), 502.10(A)(2)(2), 502.10(B)(2), 503.10(A)(3)(2), 503.10(B), 504.20, 553.7(B), 600.13(A), 600.32(A)(1), 610.11(C), 620.21(A)(1)(c)(2), 620.21(A)(2)(a), 620.21(A)(2)(d)(2), 620.21(A)(3)(a), 620.21(A)(4)(2), 620.21(B)(1), 620.21(C)(1), 645.5(E)(2), 680.42(A)(1), 682.13, 690.31(A), 695.6(D), 695.14(E)
Department of Defense Adopted UL 360 on October 1, 1987	
NSF®/ANSI 169	Special Purpose Food Equipment and Devices

ORDERING INFORMATION					PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches)	Internal Diameter (min/max) inches	Bend Radius (inches)
					Over Conduit (min/max)		
SZ01-30-00	3/8	12	100	24	0.594/0.614	0.484/0.504	2
SZ02-30-00	1/2	16	100	31	0.732/0.765	0.622/0.642	3.25
SZ03-30-00	3/4	21	100	49	0.930/0.960	0.820/0.840	4.25
SZ04-30-00	1	27	100	79	1.201/1.226	1.041/1.066	6.5
SZ05-24-00	1-1/4	35	50	103	1.540/1.570	1.380/1.410	8
SZ06-24-00	1-1/2	41	50	109	1.735/1.770	1.575/1.600	9
SZ07-24-00	2	53	50	146	2.180/2.215	2.020/2.045	11.12

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Review NEC® 350.60 and 250.118(6) for grounding requirements.
Additional trade sizes up to 4" available upon request

AFC Notes:

[illegible]



Commercial Liquidtight Flexible Conduit

- UL Type LFMC.....34-37
- UL Computer Blue Type LFMC.....38-39
- Non-UL VF.....40-41
- Type LFNC-B.....42-43
- Ultraflex Liquidtight44-45
- CSA ComBlue Flexible Conduit46
- CSA Flexible Conduit47

COMMERCIAL

LIQUID-TUFF™**UL Liquidtight Flexible Steel Conduit, Type LPMC
(Gray, Black, Red, Orange, Yellow, Green)****Scope**

This specification covers AFC Cable Systems, Inc. UL LIQUID-TUFF™ Liquidtight Flexible Steel Conduit designed for use as a raceway for power, control and communication cables in accordance with Article 350 of the National Electrical Code. The product is Underwriters Laboratories Inc. (UL) Listed for 80°C (176°F) in a dry location, 60°C (140°F) in a wet location and 70°C (158°F) in an oily location. It is also UL Listed in all trade sizes for direct burial in either earth or concrete encasement, outdoor use and sunlight resistance. This LIQUID-TUFF® is now UL Listed for 70°C OIL RESISTANT applications. In addition the product is CSA certified for use at 75°C (167°F) in dry and oily locations and for minus -30°C (22°F) low temperature applications. This Liquidtight Flexible Steel Conduit is manufactured and tested in accordance with Underwriters Laboratories Inc. Standard UL 360 and CSA International Standard CSA C22.2 Number 56. The product carries the UL Listing Mark and the CSA Certification Mark.

Construction

The Type UL Liquidtight Flexible Steel Conduit shall be formed from a zinc coated galvanized low carbon steel strip having a uniform width and thickness. The construction shall be in accordance with UL 360 and CSA C22.2 Number 56 requirements. The finished Type LPMC dimensions shall be in accordance with Table 5.1 of UL 360 and Table 2 of CSA C22.2 No. 56 which are summarized in Table 3.

Grounding

Permanent circuit ground protection is provided through the continuous bonding strip built into the conduit core in sizes 3/8" through 1-1/4". A separate grounding conductor is required by the NEC® for trade sizes 1-1/2" and larger. The Canadian Electric Code requires a grounding conductor for all trade sizes of Type UL Liquidtight Flexible Steel Conduit.

Jacket - PVC

A rugged moisture, oil and sunlight resistant polyvinyl chloride (PVC) jacket shall be applied directly over the flexible metal conduit with a wall thickness in accordance with Table 4.1 of UL 360 and Table 4 of CSA C22.2 No.56 which are summarized in Table 2. Jacket Color: Gray, Black, Red, Orange, Yellow, or Green

Markings

The surface of the outer jacket shall be clearly marked with a legible print legend in compliance with UL 360, and CSA C22.2 No. 56.

Performance Tests

In accordance with UL 360 and CSA C22.2 No. 56, the completed UL LIQUID-TUFF™ Liquidtight Flexible Steel Conduit shall meet all of the performance requirements outlined in Appendix A.

**Description**

- UL bonding strip 3/8" — 1-1/4" for grounding
- UL Liquidtight all sizes
- Sunlight resistant
- Flame retardant PVC jacket
- Hot dipped zinc galvanized low carbon steel core
- Available in Gray, Black, Red, Orange, Yellow or Green

Temperature Rating

- 80°C/176°F
- 60°C/140°F Wet
- 70°C/158°F Oil
- -30C/-22F Low temperature

Applications

- NEC® 350 Liquidtight Flexible Metal Conduit Type LPMC
- Suitable for Wet Locations
- Suitable for Direct Burial in earth
- Suitable for Concrete Embedment
- Suitable for exposure to Sunlight and Weather
- Suitable for grounding in 3/8 to 1 1/4 trade sizes per NEC® 250.118(6)
- Suitable for Flexible Connections in Hazardous Locations: Class I Div 2 NEC® 501.10(B)(2)(4), Class II Div 1 NEC® 502.10(A)(2)(2), Class II Div 2 NEC® 502.10(B)(2), Class III Div 1 NEC® 503.10(A)(3)(2) and Class III Div 2 NEC® 503.10(B).
- Suitable for Raised Computer Room Floors per NEC® 645.5(E)(2)
- Suitable for Service Entrance Wiring up to 6 feet per NEC® 230.43(15)
- Suitable for Marinas and Boatyards per NEC® 555.13(A)(1)
- Suitable for Electric signs and Outdoor Lighting per NEC® 600.31(A)(1) and 600.32(A)(1)
- Suitable for Flexible Connections for hoists and cranes per NEC® 610.11(C)
- Suitable for wiring Elevators, Dumbwaiters, Escalators, Moving Walks, Platforms and Stairway Chairlifts per NEC® 620.21
- Suitable for Motors for Permanently Installed Pools where Flexible Connections are required per NEC® 680.21(A)(3)
- Suitable for Spas and Hot Tubs where Flexible Connections are required per NEC® 680.42(A)(1)
- Suitable for feeders for Natural and Artificially Made Bodies of Water where Flexible Connections are required per NEC® 682.13
- Suitable for Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Suitable for Fire Pump Wiring per NEC® 695.6(D)
- Suitable for Electric Fire Pump Control Wiring per NEC® 695.14(E)

References & Ratings

- Underwriters Laboratories Inc. Standard: UL 360 File: E26540
- CSA Group: Standard: C22.2 No. 56 File: 51593
- NFPA 70 NEC® Article 350
- Canadian Electric Code (CEC) Part I Clause 12-1300
- UL Listed in all Trade Sizes for Direct Burial which includes Concrete Encasement
- Conduit in Trade Sizes 1 1/2 and larger require an equipment grounding conductor per NEC® 350.60

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches)	Internal Diameter (min/max) inches	Bend Radius (inches)
						Over Jacket (min/max)		
GRAY*								
6201-30-00	3/8	12	100'	—	24	0.690/0.710	0.484/0.504	2
6201-45-00	3/8	12	—	500'	24	0.690/0.710	0.484/0.504	2
6201-60-00	3/8	12	—	1000'	24	0.690/0.710	0.484/0.504	2
6201-65-00	3/8	12	—	2500'	24	0.690/0.710	0.484/0.504	2
6202-30-00	1/2	16	100'	—	31	0.820/0.840	0.622/0.642	3.25
6202-45-00	1/2	16	—	500'	31	0.820/0.840	0.622/0.642	3.25
6202-60-00	1/2	16	—	1000'	31	0.820/0.840	0.622/0.642	3.25
6202-68-00	1/2	16	—	3500'	31	0.820/0.840	0.622/0.642	3.25
6203-30-00	3/4	21	100'	—	49	1.030/1.050	0.820/0.840	4.25
6203-45-00	3/4	21	—	500'	49	1.030/1.050	0.820/0.840	4.25
6203-60-00	3/4	21	—	1000'	49	1.030/1.050	0.820/0.840	4.25
6203-66-00	3/4	21	—	2000'	49	1.030/1.050	0.820/0.840	4.25
6204-30-00	1	27	100'	—	79	1.290/1.315	1.041/1.066	6.5
6204-41-00	1	27	—	400'	79	1.290/1.315	1.041/1.066	6.5
6204-64-00	1	27	—	1250'	79	1.290/1.315	1.041/1.066	6.5
6205-24-00	1-1/4	35	50'	—	103	1.630/1.660	1.380/1.410	8
6205-40-00	1-1/4	35	—	200'	103	1.630/1.660	1.380/1.410	8
6205-47-00	1-1/4	35	—	750'	103	1.630/1.660	1.380/1.410	8
6206-24-00	1-1/2	41	50'	—	109	1.865/1.900	1.575/1.600	9
6206-35-00	1-1/2	41	—	150'	109	1.865/1.900	1.575/1.600	9
6206-62-00	1-1/2	41	—	600'	109	1.865/1.900	1.575/1.600	9
6207-24-00	2	53	50'	—	146	2.340/2.375	2.020/2.045	11.12
6207-30-00	2	53	—	100'	146	2.340/2.375	2.020/2.045	11.12
6207-80-00	2	53	—	300'	146	2.340/2.375	2.020/2.045	11.12
6208-22-00	2-1/2	63	25'	—	169	2.840/2.875	2.480/2.505	14.62
6208-79-00	2-1/2	63	—	275'	169	2.840/2.875	2.480/2.505	14.62
6209-22-00	3	78	25'	—	195	3.460/3.500	3.070/3.100	17.5
6209-56-00	3	78	—	175'	195	3.460/3.500	3.070/3.100	17.5
6220-22-00	3-1/2	91	25'	—	230	3.960/4.000	3.500/3.540	20
6220-56-00	3-1/2	91	—	175'	230	3.960/4.000	3.500/3.540	20
6210-22-00	4	103	25'	—	250	4.460/4.500	4.000/4.040	24
6210-30-00	4	103	—	100'	250	4.460/4.500	4.000/4.040	24

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Review NEC® 350.60 and 250.118(6) for grounding requirements.

Made in USA of US and/or imported materials.

(Chart continues on next page.)

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches)	Internal Diameter (min/max) inches	Bend Radius (inches)
						Over Jacket (min/max)		
BLACK								
6201-30-BK	3/8	12	100'	—	24	0.690/0.710	0.484/0.504	2
6202-30-BK	1/2	16	100'	—	31	0.820/0.840	0.622/0.642	3.25
6202-45-BK	1/2	16	—	500'	31	0.820/0.840	0.622/0.642	3.25
6202-60-BK	1/2	16	—	1000'	31	0.820/0.840	0.622/0.642	3.25
6203-30-BK	3/4	21	100'	—	49	1.030/1.050	0.820/0.840	4.25
6203-45-BK	3/4	21	—	500'	49	1.030/1.050	0.820/0.840	4.25
6203-60-BK	3/4	21	—	1000'	49	1.030/1.050	0.820/0.840	4.25
6204-30-BK	1	27	100'	—	79	1.290/1.315	1.041/1.066	6.5
6204-41-BK	1	27	—	400'	79	1.290/1.315	1.041/1.066	6.5
6205-24-BK	1-1/4	35	50'	—	103	1.630/1.660	1.380/1.410	8
6205-40-BK	1-1/4	35	—	200'	103	1.630/1.660	1.380/1.410	8
*6206-24-BK	1-1/2	41	50'	—	109	1.865/1.900	1.575/1.600	9
*6206-35-BK	1-1/2	41	—	150'	109	1.865/1.900	1.575/1.600	9
*6207-30-BK	2	53	—	100'	146	2.340/2.375	2.020/2.045	11.12

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Review NEC® 350.60 and 250.118(6) for grounding requirements, conduit sizes 1-1/2" and larger.

*Minimum order quantity required.

RED*								
6202-30-RD	1/2	16	100'	—	31	0.820/0.840	0.622/0.642	3.25
6202-60-RD	1/2	16	—	1000'	31	0.820/0.840	0.622/0.642	3.25
6203-30-RD	3/4	21	100'	—	49	1.030/1.050	0.820/0.840	4.25
6203-45-RD	3/4	21	—	500'†	49	1.030/1.050	0.820/0.840	4.25
ORANGE*								
6202-30-OE	1/2	16	100'	—	31	0.820/0.840	0.622/0.642	3.25
6202-60-OE	1/2	16	—	1000'	31	0.820/0.840	0.622/0.642	3.25
6203-30-OE	3/4	21	100'	—	49	1.030/1.050	0.820/0.840	4.25
6203-45-OE	3/4	21	—	500'†	49	1.030/1.050	0.820/0.840	4.25
YELLOW*								
6202-30-YW	1/2	16	100'	—	31	0.820/0.840	0.622/0.642	3.25
6202-60-YW	1/2	16	—	1000'	31	0.820/0.840	0.622/0.642	3.25
6203-30-YW	3/4	21	100'	—	49	1.030/1.050	0.820/0.840	4.25
6203-45-YW	3/4	21	—	500'†	49	1.030/1.050	0.820/0.840	4.25
GREEN*								
6202-30-GN	1/2	16	100'	—	31	0.820/0.840	0.622/0.642	3.25
6202-60-GN	1/2	16	—	1000'	31	0.820/0.840	0.622/0.642	3.25
6203-30-GN	3/4	21	100'	—	49	1.030/1.050	0.820/0.840	4.25
6203-45-GN	3/4	21	—	500'†	49	1.030/1.050	0.820/0.840	4.25

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Made in USA of US and/or imported materials. Review NEC® 350.60 and 250.118(6) for grounding requirements. † 3/4" available on 1000' reels. Call for details.

Table 2. Jacket Thickness

Conduit Trade		Min. Acceptable Average Thickness of Jacket (inches)
Trade Size	Metric Designator	
3/8	12	0.030
1/2	16	0.030
3/4	21	0.035
1	27	0.035
1-1/4	35	0.035
1-1/2	41	0.040
2	53	0.040
2-1/2	63	0.050
3	78	0.050
3-1/2	91	0.060
4	103	0.060

Appendix A

UL Performance Tests	CSA Performance Tests
UL 360 Standard	CSA C22.2 NO. 56 STANDARD
RESISTANCE TEST	-
FAULT CURRENT	-
IMPACT	-
-	COLD IMPACT
TENSION	TENSION
CRUSHING	-
PIPE STIFFNESS for DIRECT BURIAL	-
ROOM TEMPERATURE FLEXIBILITY	-
LOW TEMPERATURE FLEXIBILITY	LOW TEMPERATURE FLEXIBILITY
ZINC COATING	ZINC COATING
VERTICAL FLAME	VERTICAL FLAME
PHYSICAL PROPERTIES of JACKET	PHYSICAL PROPERTIES of JACKET
ORIGINAL TENSILE and ELONGATION	ORIGINAL TENSILE and ELONGATION
AIR OVEN AGING TESTS	AIR OVEN AGING TESTS
OIL IMMERSION in AIR OVEN TESTS	OIL IMMERSION in AIR OVEN TESTS
DEFORMATION TEST	DEFORMATION TEST
MECHANICAL WATER ABSORPTION	-
MOISTURE PENETRATION	-
SUNLIGHT RESISTANCE	-
TEST for SECURENESS of FITTINGS	COMPATIBILITY with CONNECTORS
TEST for DURABILITY of INK PRINTING	-
-	PINHOLE TEST

Table 3. Conduit Diameters — Acceptable Internal and External Diameters

Conduit Size		Internal Diameter (in.)		Over Jacket (in.)	
Trade Size (in.)	Metric Designator	Min.	Max.	Min.	Max.
3/8	12	0.484	0.504	0.690	0.710
1/2	16	0.622	0.642	0.820	0.840
3/4	21	0.820	0.840	1.030	1.050
1	27	1.041	1.066	1.290	1.315
1-1/4	35	1.380	1.410	1.630	1.660
1-1/2	41	1.575	1.600	1.865	1.900
2	53	2.020	2.045	2.340	2.375
2-1/2	63	2.480	2.505	2.840	2.875
3	78	3.070	3.100	3.460	3.500
3-1/2	91	3.500	3.540	3.960	4.000
4	103	4.000	4.040	4.460	4.500

Reference Standards

UL 360	Standard for Liquidtight Flexible Metal Conduit
CSA C22.2 No. 56	Standard for Flexible Metal Conduit and Liquidtight Flexible Metal Conduit
UL 514B	Standard for Conduit, Tubing and Cable Fittings
NEMA RV 3	Application and Installation Guidelines for Flexible and Liquidtight Flexible Metal Conduits
Department of Defense Adopted UL 360 on October 1, 1987	

LIQUID-TUFF™**Computer Blue UL Liquidtight Flexible Metal Conduit Type LFMC****Scope**

This specification covers AFC Cable Systems, Inc. UL LIQUID-TUFF™ Computer Blue Liquidtight Flexible Steel Conduit designed for use as a raceway for power, control and communication cables in accordance with Article 350 of the National Electrical Code. The product is Underwriters Laboratories Inc. (UL) Listed for 80°C (176°F) in a dry location, 60°C (140°F) in a wet location and 70°C (158°F) in an oily location. It is also UL Listed in all trade sizes for direct burial in either earth or concrete encasement, outdoor use and sunlight resistance. This LIQUID-TUFF™ is now UL Listed for 70°C OIL RESISTANT applications. In addition the product is CSA certified for use at 75°C (167°F) in dry and oily locations and for minus -30°C (22°F) low temperature applications. This Liquidtight Flexible Steel Conduit is manufactured and tested in accordance with Underwriters Laboratories Inc. Standard UL 360 and CSA International Standard CSA C22.2 Number 56. The product carries the UL Listing Mark and the CSA Certification Mark.

Construction

The UL Liquidtight Flexible Steel Conduit shall be formed from a zinc coated galvanized low carbon steel strip having a uniform width and thickness. The construction shall be in accordance with UL 360 and CSA C22.2 Number 56 requirements. The finished Type LFMC dimensions shall be in accordance with Table 5.1 of UL 360 and Table 2 of CSA C22.2 No. 56 which are summarized in Table 2.

Jacket - PVC

A rugged moisture, oil and sunlight resistant polyvinyl chloride (PVC-colored Blue) jacket shall be applied directly over the flexible metal conduit with a wall thickness in accordance with Table 4.1 of UL 360 and Table 4 of CSA C22.2 No. 56 which are summarized in Table 2. Jacket: Blue

Grounding

Permanent circuit ground protection is provided through the continuous bonding strip built into the conduit core in sizes 3/8" through 1-1/4". A separate grounding conductor is required by the NEC® for trade sizes 1-1/2" and larger. The Canadian Electric Code requires a grounding conductor for all trade sizes of Liquidtight Flexible Metal Computer Blue Conduit.

Markings

The surface of the outer jacket shall be clearly marked with a legible print legend in compliance with UL 360 and CSA C22.2 No. 56.

Performance Tests

In accordance with UL 360 and CSA C22.2 No. 56, the completed UL LIQUID-TUFF™ Computer Blue Liquidtight Flexible Steel Conduit shall meet all of the performance requirements outlined in Appendix A.

**Description**

- UL bonded strip 3/8" – 1-1/4" for grounding
- UL Liquidtight all sizes
- Sunlight resistant
- Flame retardant PVC jacket
- Hot dipped zinc galvanized low carbon steel core
- Blue PVC jacket

Temperature Rating

- 80°C (176°F) DRY
- 60°C (140°F) WET
- 70°C (158°F) OIL
- -30°C (-22°F) LOW TEMPERATURE

Applications

- NEC® 350 Liquidtight Flexible Metal Conduit Type LFMC
- Suitable for Wet Locations
- Suitable for Direct Burial in earth
- Suitable for Concrete Embedment
- Suitable for exposure to Sunlight and Weather
- Suitable for grounding in 3/8 to 1 1/4 trade sizes per NEC® 250.118(6)
- Suitable for Flexible Connections in Hazardous Locations: Class I Div 2 NEC® 501.10(B)(2)(4), Class II Div 1 NEC® 502.10(A)(2)(2), Class II Div 2 NEC® 502.10(B)(2), Class III Div 1 NEC® 503.10(A)(3)(2) and Class III Div 2 NEC® 503.10(B).
- Suitable for Raised Computer Room Floors per NEC® 645.5(E)(2)
- Suitable for Service Entrance Wiring up to 6 feet per NEC® 230.43(15)
- Suitable for Marinas and Boatyards per NEC® 555.13(A)(1)
- Suitable for Electric signs and Outdoor Lighting per NEC® 600.31(A)(1) and 600.32(A)(1)
- Suitable for Flexible Connections for hoists and cranes per NEC® 610.11(C)
- Suitable for wiring Elevators, Dumbwaiters, Escalators, Moving Walks, Platforms and Stairway Chairlifts per NEC® 620.21
- Suitable for Motors for Permanently Installed Pools where Flexible Connections are required per NEC® 680.21(A)(3)
- Suitable for Spas and Hot Tubs where Flexible Connections are required per NEC® 680.42(A)(1)
- Suitable for feeders for Natural and Artificially Made Bodies of Water where Flexible Connections are required per NEC® 682.13
- Suitable for Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Suitable for Fire Pump Wiring per NEC® 695.6(D)
- Suitable for Electric Fire Pump Control Wiring per NEC® 695.14(E)

References & Ratings

- Underwriters Laboratories Inc. Standard: UL 360 File: E26540
- CSA Group: Standard: C22.2 No. 56 File: 51593
- NFPA 70 NEC® Article 350
- Canadian Electric Code (CEC) Part I Clause 12-1300
- UL Listed in all Trade Sizes for Direct Burial which includes Concrete Encasement
- Conduit in Trade Sizes 1 1/2 and larger require an equipment grounding conductor per NEC® 350.60

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS			
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches)		Internal Diameter (min/max) inches	Bend Radius (inches)
						Over Jacket (min/max)			
6402-30-00	1/2	16	100'	—	31	0.820/0.840		0.622/0.642	3.25
6402-45-00	1/2	16	—	500'	31	0.820/0.840		0.622/0.642	3.25
6402-60-00	1/2	16	—	1000'	31	0.820/0.840		0.622/0.642	3.25
6403-30-00	3/4	21	100'	—	49	1.030/1.050		0.820/0.840	4.25
6403-45-00	3/4	21	—	500'	49	1.030/1.050		0.820/0.840	4.25
6403-66-00	3/4	21	—	2000'	49	1.030/1.050		0.820/0.840	4.25
6404-30-00	1	27	100'	—	79	1.290/1.315		1.041/1.066	6.5
6404-41-00	1	27	—	400'	79	1.290/1.315		1.041/1.066	6.5
6405-24-00	1-1/4	35	50'	—	103	1.630/1.660		1.380/1.410	8
6405-40-00	1-1/4	35	—	200'	103	1.630/1.660		1.380/1.410	8
6406-24-00	1-1/2	41	50'	—	90	1.865/1.900		1.575/1.600	9
6406-35-00	1-1/2	41	—	150'	90	1.865/1.900		1.575/1.600	9
6407-24-00	2	53	50'	—	120	2.340/2.375		2.020/2.045	11.12
6407-30-00	2	53	—	100'	120	2.340/2.375		2.020/2.045	11.12
6408-22-00	2-1/2	63	25'	—	121	2.840/2.875		2.480/2.505	14.62
6408-79-00	2-1/2	63	—	275'	121	2.840/2.875		2.480/2.505	14.62
6409-22-00	3	78	25'	—	145	3.460/3.500		3.070/3.100	17.5
6409-56-00	3	78	—	175'	145	3.460/3.500		3.070/3.100	17.5

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Review NEC® 350.60 and 250.118(6) for grounding requirements.

Appendix A	
UL Performance Tests	CSA Performance Tests
UL 360 Standard	CSA C22.2 NO. 56 STANDARD
RESISTANCE TEST	-
FAULT CURRENT	-
IMPACT	-
	COLD IMPACT
TENSION	TENSION
CRUSHING	-
PIPE STIFFNESS for DIRECT BURIAL	-
ROOM TEMPERATURE FLEXIBILITY	-
LOW TEMPERATURE FLEXIBILITY	LOW TEMPERATURE FLEXIBILITY
ZINC COATING	ZINC COATING
VERTICAL FLAME	VERTICAL FLAME
PHYSICAL PROPERTIES of JACKET	PHYSICAL PROPERTIES of JACKET
ORIGINAL TENSILE and ELONGATION	ORIGINAL TENSILE and ELONGATION
AIR OVEN AGING TESTS	AIR OVEN AGING TESTS
OIL IMMERSION in AIR OVEN TESTS	OIL IMMERSION in AIR OVEN TESTS
DEFORMATION TEST	DEFORMATION TEST
MECHANICAL WATER ABSORPTION	-
MOISTURE PENETRATION	-
SUNLIGHT RESISTANCE	-
TEST for SECURENESS of FITTINGS	COMPATIBILITY with CONNECTORS
TEST for DURABILITY of INK PRINTING	-
	PINHOLE TEST

Reference Standards	
UL 360	Standard for Liquidtight Flexible Metal Conduit
CSA C22.2 No. 56	Standard for Flexible metal Conduit and Liquidtight Flexible Metal Conduit
UL 514B	Standard for Conduit, Tubing and Cable Fittings
NFPA 70	National Electric Code (NEC®) Articles 250, 350, 390, 501, 502, 503, 504, 511, 620, 645, 680 and 690
NEMA RV 3	Application and Installation Guidelines for Flexible and Liquidtight Flexible Metal Conduits

Table 2. Conduit Diameters — Acceptable Internal and External Diameters

Conduit Size		Internal Diameter (in.)		Over Jacket (in.)	
Trade Size (in.)	Metric Designator	Min.	Max.	Min.	Max.
3/8	12	0.484	0.504	0.690	0.710
1/2	16	0.622	0.642	0.820	0.840
3/4	21	0.820	0.840	1.030	1.050
1	27	1.041	1.066	1.290	1.315
1-1/4	35	1.380	1.410	1.630	1.660
1-1/2	41	1.575	1.600	1.865	1.900
2	53	2.020	2.045	2.340	2.375
2-1/2	63	2.480	2.505	2.840	2.875
3	78	3.070	3.100	3.460	3.500
3-1/2	91	3.500	3.540	3.960	4.000
4	103	4.000	4.040	4.460	4.500

Table 3. Jacket Thickness

Conduit Trade		Min. Acceptable Average Thickness of Jacket (inches)
Trade Size	Metric Designator	
3/8	12	0.030
1/2	16	0.030
3/4	21	0.035
1	27	0.035
1-1/4	35	0.035
1-1/2	41	0.040
2	53	0.040
2-1/2	63	0.050
3	78	0.050
3-1/2	91	0.060
4	103	0.060

LIQUID-TUFF™

Non-UL Liquidtight VF Flexible Steel Conduit

Scope

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF™ Liquidtight, Flexible Steel Conduit, VF designed for use in specific applications where the product is designed to be used for specific applications where Underwriters Laboratories Inc. (UL) or other agency approvals are not required, but when flexibility is required. The product is appropriate for use at 60°C (140°F) in a dry location, 60°C in a wet location or 60°C in an oily location. SUNLIGHT RESISTANT in all trade sizes. The product has no agency listing or certification.

Construction

The LIQUID-TUFF™ Liquidtight, Flexible Steel Conduit, VF core shall be formed into an interlocked steel conduit from a zinc coated galvanized low carbon steel strip having a uniform width and thickness. The convolutions of the interlock shall be filed with a fibrous material designed to promote flexibility.

Jacket - PVC

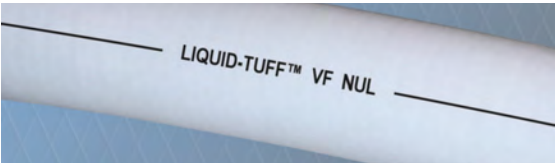
A rugged moisture, oil and sunlight resistant polyvinyl chloride (PVC) jacket shall be extruded directly over the interlocked flexible steel core with a wall thickness in conformance with Table 1 below. Jacket: Gray

Markings

The outer surface of the jacket shall be clearly marked with the applicable print legend.

Performance Tests

The completed LIQUID-TUFF™ Liquidtight, Flexible Steel Conduit, VF shall meet all of the performance requirements prescribed by applicable manufacturing standards.



Description

- Mechanical and moisture protection for conductors
- Sunlight resistant
- Flame retardant PVC jacket – Gray
- Hot dipped zinc galvanized low carbon steel core
- Very flexible

Temperature Rating

- 60°C to -20°C Dry
- 60°C Wet
- 60°C Oil resistant

Applications

- 600 volt and lower circuits
- Vibration and movement absorbing
- Made in USA of US and/or imported materials

Table 1.

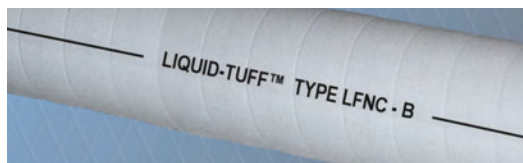
Conduit Trade		Min. Acceptable Average Thickness of Jacket (inches)
Trade Size	Metric Designator	
3/8	12	0.030
1/2	16	0.030
3/4	21	0.035
1	27	0.035
1-1/4	35	0.035
1-1/2	41	0.040
2	53	0.040
2-1/2	63	0.050
3	78	0.050
3-1/2	91	0.060
4	103	0.060

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	External Diameter (inches)	Internal Diameter (min/max) inches	Bend Radius (inches)
						Over Jacket (min/max)		
6101-30-00	3/8	12	100'	—	22	0.690/0.710	0.484/0.504	2
6101-45-00	3/8	12	—	500'	22	0.690/0.710	0.484/0.504	2
6101-60-00	3/8	12	—	1000'	22	0.690/0.710	0.484/0.504	2
6101-65-00	3/8	12	—	2500'	22	0.690/0.710	0.484/0.504	2
6102-30-00	1/2	16	100'	—	26	0.820/0.840	0.622/0.642	3.25
6102-45-00	1/2	16	—	500'	26	0.820/0.840	0.622/0.642	3.25
6102-60-00	1/2	16	—	1000'	26	0.820/0.840	0.622/0.642	3.25
6102-68-00	1/2	16	—	3500'	26	0.820/0.840	0.622/0.642	3.25
6103-30-00	3/4	21	100'	—	33	1.030/1.050	0.820/0.840	4.25
6103-45-00	3/4	21	—	500'	33	1.030/1.050	0.820/0.840	4.25
6103-60-00	3/4	21	—	1000'	33	1.030/1.050	0.820/0.840	4.25
6103-66-00	3/4	21	—	2000'	33	1.030/1.050	0.820/0.840	4.25
6104-30-00	1	27	100'	—	45	1.290/1.315	1.041/1.066	6.5
6104-41-00	1	27	—	400'	45	1.290/1.315	1.041/1.066	6.5
6105-24-00	1-1/4	35	50'	—	60	1.630/1.660	1.380/1.410	8
6105-40-00	1-1/4	35	—	200'	60	1.630/1.660	1.380/1.410	8
6105-47-00	1-1/4	35	—	750'	60	1.630/1.660	1.380/1.410	8
6106-24-00	1-1/2	41	50'	—	90	1.865/1.900	1.575/1.600	9
6106-35-00	1-1/2	41	—	150'	90	1.865/1.900	1.575/1.600	9
6106-62-00	1-1/2	41	—	600'	90	1.865/1.900	1.575/1.600	9
6107-24-00	2	53	50'	—	120	2.340/2.375	2.020/2.045	11.12
6107-30-00	2	53	—	100'	120	2.340/2.375	2.020/2.045	11.12
6107-80-00	2	53	—	300'	120	2.340/2.375	2.020/2.045	11.12
6108-22-00	2-1/2	63	25'	—	121	2.840/2.875	2.480/2.505	14.62
6108-79-00	2-1/2	63	—	275'	121	2.840/2.875	2.480/2.505	14.62
6109-22-00	3	78	25'	—	145	3.460/3.500	3.070/3.100	17.5
6109-56-00	3	78	—	175'	145	3.460/3.500	3.070/3.100	17.5
6120-22-00	3-1/2	91	25'	—	200	3.960/4.000	3.500/3.540	20
6120-56-00	3-1/2	91	—	175'	200	3.960/4.000	3.500/3.540	20
6110-22-00	4	103	25'	—	250	4.460/4.500	4.000/4.040	24
6110-30-00	4	103	—	100'	250	4.460/4.500	4.000/4.040	24

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. **Not for grounding.**

LIQUID-TUFF™

UL Liquidtight Flexible Nonmetallic Conduit Type LFNC-B



Scope

This specification covers AFC Cable Systems, Inc. UL LIQUID-TUFF™ Integral Liquidtight Flexible Nonmetallic Conduit, Type LFNC-B designed for use in wet, dry or oily locations as a flame resistant, Nonmetallic raceway for power, control and communications cables in compliance with Article 356 of the National Electrical Code. The product is UL Listed for 80°C (176°F) in a dry location, 60°C (140°F) in a wet location and 70°C (158°F) in an oily location. It is also UL Listed through 2-inch trade sizes for direct burial, outdoor use and sunlight resistance. In addition the product is CSA certified for use at 75°C (167°F) in dry and oily locations and for minus 18°C (0°F) low temperature applications. This Liquidtight Flexible Nonmetallic Conduit is manufactured and tested in accordance with the harmonized Underwriters Laboratories Inc. Standard UL 1660 and CSA International Standard CSA C22.2 Number 227.2.1. The product carries the UL Listing Mark and the CSA Certification Mark.

Construction

Liquidtight Flexible Nonmetallic Conduit, Type LFNC-B is a raceway of circular cross section with a smooth polyvinyl chloride (PVC) inner surface and an integral rigid PVC reinforcing member within the conduit wall. The wall thicknesses and dimensions of the integral conduit shall comply with Table 3 of harmonized UL 1660/CSA No. 227.2.1 which are summarized in Table 1.

A rugged moisture, oil and sunlight resistant flexible polyvinyl chloride (PVC) jacket shall be extruded directly over the integral rigid PVC core with a wall thickness in conformance with Product Information below. Jacket: Gray

Grounding

A separate Grounding conductor is required by both the National Electrical Code and the Canadian Electrical Code for all trade sizes.

Markings

The surface of the outer jacket shall be clearly marked with a legible print legend in compliance with UL 1660 and CSA C22.2 No. 227.2.1.

Performance Tests

The completed UL LIQUID-TUFF™ Liquidtight Flexible Nonmetallic Conduit, Type LFNC-B shall meet all of the performance requirements contained in UL 1660 and CSA C22.2 No. 227.2.1 and outlined in Appendix A.

Description

- UL Listed and CSA certified
- Rugged Nonmetallic PVC
- Interior integral reinforced member within conduit wall
- Integral Type B construction per NEC® 356.2(2)
- Rigid PVC spiral core for strength
- Outdoor applications including direct burial
- Rated for concrete embedment
- Sunlight and oil resistant
- Non-conductive raceway

Temperature Rating

- 80°C (176°F) DRY
- 60°C (140°F) WET
- 70°C (158°F) OIL
- -18°C (0°F) LOW TEMPERATURE

Applications & References

- NEC® 356.2(2) Liquidtight Flexible Nonmetallic Conduit Type LFNC-B
- Suitable for Wet Locations
- Suitable for Direct Burial in earth
- Suitable for Concrete Embedment
- Suitable for exposure to Sunlight and Weather
- Suitable for Flexible Connections in Hazardous Locations: Class I Div 2 NEC® 501.10(B)(2)(5), Class II Div 1 NEC® 502.10(A)(2)(3), Class II Div 2 NEC® 502.10(B)(2), Class III Div 1 NEC® 503.10(A)(3)(3) and Class III Div 2 NEC® 503.10(B).
- Suitable for Raised Computer Room Floors per NEC® 645.5(E)(2)
- Suitable for Service Entrance Wiring per NEC® 230.43(16)
- Suitable for Marinas and Boatyards per NEC® 555.13(A)(1)
- Suitable for Electric signs and Outdoor Lighting per NEC® 600.31(A)(1) and 600.32(A)(1)
- Suitable for Flexible Connections for hoists and cranes per NEC® 610.11(C)
- Suitable for wiring Elevators, Dumbwaiters, Escalators, Moving Walks, Platforms and Stairway Chairlifts per NEC® 620.21
- Suitable for Motors for Permanently Installed Pools where Flexible Connections are required per NEC® 680.21(A)(3)
- Suitable for Spas and Hot Tubs where Flexible Connections are required per NEC® 680.42(A)(1)
- Suitable for feeders for Natural and Artificially Made Bodies of Water where Flexible Connections are required per NEC® 682.13
- Suitable for Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Suitable for Fire Pump Wiring per NEC® 695.6(D)
- Suitable for Electric Fire Pump Control Wiring per NEC® 695.14(E)

Ratings

- Underwriters Laboratories Inc. Standard: UL 1660 File: E123464
- CSA Group: Standard: C22.2 No. 227.2.1 File: 69271
- NFPA 70 NEC® Article 356
- Canadian Electric Code (CEC) Part I Clause 12-1300
- UL Listed in all Trade Sizes for Direct Burial which includes Concrete Encasement
- All Trade Sizes require an equipment grounding conductor per NEC® 356.60
- All Trade Sizes require a bonding conductor per CEC Rule 12-1306

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)*	Approx. Weight 100 feet (pounds)	Internal Diameter (min/max) inches	External Diameter (min/max) inches	Bend Radius (inches)
6001-30-00	3/8	12	100'	—	12	0.484/0.504	0.690/0.710	2
6002-30-00	1/2	16	100'	—	13	0.622/0.642	0.820/0.840	3.25
6002-60-00	1/2	16	—	1000'	13	0.622/0.642	0.820/0.840	3.25
6003-30-00	3/4	21	100'	—	18	0.820/0.840	1.030/1.050	4.25
6003-46-00	3/4	21	—	700'	18	0.820/0.840	1.030/1.050	4.25
6004-30-00	1	27	100'	—	27	1.041/1.066	1.290/1.315	6.5
6004-45-00	1	27	—	500'	27	1.041/1.066	1.290/1.315	6.5
6005-24-00	1-1/4	35	50'	—	35	1.380/1.410	1.630/1.660	8
6006-24-00	1-1/2	41	50'	—	48	1.575/1.600	1.865/1.900	9
6007-24-00	2	53	50'	—	70	2.020/2.045	2.340/2.375	11.1

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.

* Continuous lengths available in 1/2" – 1-1/4"

Reference Standards	
UL 1660/ CSA C22.2 No. 227.2.1	Harmonized Standard for Liquidtight Flexible Nonmetallic Conduit
UL514B	Standard for Conduit, Tubing and Cable Fittings
NFPA 70	National Electric Code (NEC®) Articles 250, 356, 390, 501, 502, 503, 504, 511, 620, 645, 680 and 690

Appendix A	
UL Performance Tests	CSA Performance Tests
Physical Properties: • Original Tensile and Elongation • Air Oven Aging Test • Oil Immersion Test • Deformation Test	Physical Properties: • Original Tensile and Elongation • Air Oven Aging Test • Oil Immersion Test • Deformation
Tension	Tension
Cold Flexibility	Cold Flexibility
Vertical Flame	Vertical Flame
Cold Impact	Cold Impact
Secureness of Fittings	Fitting Pull-Out
Mechanical Water Absorption	Fitting Liquid-Tightness
Moisture Penetration Test	Moisture Penetration Test
Durability of Ink	Durability of Ink
Weather Resistance	Weather Resistance
Resistance to Deflections Resist	
Pipe Stiffness for Direct Burial	

LIQUID-TUFF™

Ultraflex™ Nonmetallic Mechanical (NMPT-B) Protection Tubing (1) Recognized Component

Scope

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF™ Liquidtight ULTRAFLEX™ (1)  RECOGNIZED COMPONENT EXTRA-FLEXIBLE NONMETALLIC MECHANICAL PROTECTION TUBING. (1) LIQUID-TUFF™ Liquidtight ULTRAFLEX™  RECOGNIZED COMPONENT EXTRA FLEXIBLE NONMETALLIC MECHANICAL PROTECTION TUBING is designed for use in connection with the support of and protection of insulated wires, placed within the tubing, that are used to interconnect separate component assemblies or consoles of electrical apparatus, such as x-ray equipment. Use of the combination is to be determined by Underwriters Laboratories Inc. The acceptable use of this material is limited to the following conditions:

1. This tubing may be used for the routing of internal wiring between electrical components of electrical equipment. The protection afforded to the internal wiring by the tubing may be considered equivalent to the protection afforded the internal conductors by the jacket of a Type SJT flexible cord.
2. The tubing is suitable for use at a maximum temperature of 60°C.
3. The tubing and manufacturer's supplied fittings were not tested to determine flammability rating per UL 224.
4. The tubing shall be terminated at each end of the consoles or appliances to which connected to provide strain relief to withstand a 35-pound pull for 1.0 minute. Fittings available from the manufacturer met this requirement.
5. The percent fill of the tubing with conductors shall not exceed 75% where percent fill is defined as: Percent Fill = Area of Enclosed Conductors x 100/Internal Area of Tubing Fill Factor.
6. The minimum bend radius shall not be less than the outside diameter of the tubing.
7. The manufacturer's fittings were subjected to the Oil Spray Test in accordance with UL 514B.
8. As this tubing and manufacturer supplied fittings are to be Recognized as a Component, final acceptance will be determined in terms of the combination of component and appliance as determined by Underwriters Laboratories Inc., regarding such characteristics as flammability; degree of bending or flexing; resistance to water, oil and abrasion; and physical strength.

LIQUID-TUFF™ Liquidtight ULTRAFLEX™ EXTRA-FLEXIBLE Nonmetallic tubing is designed for use in wet, dry or oily locations as a flame resistant, Nonmetallic raceway for power, control and communications cables. The product is intended for use at 60°C (140°F) in a dry location, 60°C (140°F) in a wet location and 60°C (140°F) in a oily location. It is sunlight resistant.



Construction

LIQUID-TUFF™ Liquidtight ULTRAFLEX™ MECHANICAL PROTECTION TUBING has a circular cross section with a smooth polyvinyl chloride (PVC) inner surface and an integral reinforcing member within the conduit wall. The dimensions of the integral tubing/conduit shall comply with Table 1. Color: black.

Grounding

Where applicable a separate grounding conductor is required for all trade sizes.

Markings

The product marking is contained on the outer carton.

Performance Tests

The completed LIQUID-TUFF™ Liquidtight ULTRAFLEX™ TUBING shall meet the performance requirements outlined in Appendix A.

Standards

- Harmonized UL1696/CSA C22.2 No. 227.3
- Nonmetallic Mechanical Protection Tubing
- To maintain the Recognized Component Certification, the tubing and fittings must be from the same manufacturer. The components are not interchangeable. For fittings, please see Table 2.

File

UL E79977

Description

-  component, extra-flexible Nonmetallic mechanical protection tubing
- Corrugated flame resistant PVC with integral reinforcing member
- Non-conductive raceway – black

Temperature Rating

- 60°C Dry
- 60°C Wet and Oily

Applications

-  recognized component for use in protection of insulated wire in assemblies or consoles of electrical apparatus. Use is to be determined by Underwriters Laboratories Inc.

References & Ratings

-  recognized component Liquidtight Mechanical Protection Tubing under UL File Number E79977
- UL1696 Standard for Nonmetallic Mechanical Protection Tubing
- CSA File LL69271
- CSA C22.2 No. 227.3
- Made in USA of US and/or imported materials

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight 100 feet (pounds)	Internal Diameter (min/max) inches	External Diameter (min/max) inches	Bend Radius (inches)
160-012	3/8	12	100'	—	5	0.484/0.504	0.695/0.705	0.49
160-016	1/2	16	100'	—	8	0.622/0.642	0.825/0.835	0.63
160-021	3/4	21	100'	—	11	0.820/0.840	1.035/1.045	0.83
160-026	1	27	100'	—	16	1.041/1.066	1.297/1.308	1.10
160-035	1-1/4	35	100'	—	21	1.380/1.410	1.640/1.650	1.40
160-040	1-1/2	41	100'	—	26	1.575/1.600	1.877/1.888	1.59
160-051	2	53	100'	—	33	2.020/2.045	2.352/2.363	2.04

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.

Appendix A
Performance Requirements
Heat Aging Test
Cold Bend Test
Heat Shock Test
Crush Test
Impact Test
Oil Spray Test

Table 1.							
Conduit Size		Inside Diameter (in.)		Outside Diameter (in.)		Min. Bend Radius (in.)	Weight lbs./100 ft.
Trade Size (in.)	Metric	Min.	Max.	Min.	Max.		
3/8	(12)	0.484	0.504	0.695	0.705	0.49	5
1/2	(16)	0.622	0.642	0.825	0.835	0.63	8
3/4	(21)	0.820	0.840	1.035	1.045	0.83	11
1	(27)	1.042	1.066	1.297	1.308	1.10	16
1-1/4	(35)	1.380	1.410	1.640	1.650	1.40	21
1-1/2	(41)	1.576	1.600	1.877	1.888	1.59	26
2	(53)	2.021	2.045	2.32	2.363	2.04	33



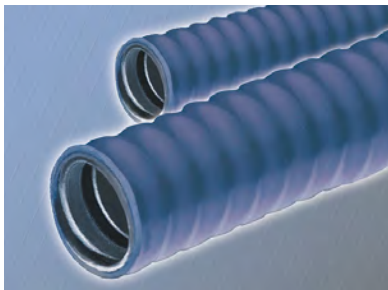
Table 2.			
Size (IN)	Straight Designations	90 Degree Designations	Colors
3/8	0921-PP-GY	0981-PP-GY	Gray
1/2	0922-PP-BK/0922-PP-GY	0982-PP-BK/0982-PP-GY	Black/Gray
3/4	0923-PP-BK/0923-PP-GY	0983-PP-BK/0983-PP-GY	Black/Gray
1	0924-PP-BK/0924-PP-GY	0984-PP-BK/0984-PP-GY	Black/Gray
1-1/4	0925-PP-BK/0925-PP-GY	0985-PP-BK/0985-PP-GY	Black/Gray
1-1/2	0926-PP-BK/0926-PP-GY	0986-PP-BK/0986-PP-GY	Black/Gray
2	0927-PP-BK/0927-PP-GY	0987-PP-BK/0987-PP-GY	Black/Gray

HYDROTITE™

HYDROTITE™ — Type "COM-BLUE" Liquidtight Flexible Metal Conduit

Description

- Corrosion resistant hot-dipped galvanized zinc steel core
- FT-4 rated PVC jacket
- Integral bond wire inserted between the convolutions of the spiral wound metal armor for Trade Sizes 12 (3/8) – 35 (1¼)
- UV resistant
- Flexible in cold weather
- Sequential Print in meters printed on jacket



Specifications

- Available with custom print up to 200 characters long
- Temperature rating 75°C dry, 60°C wet, 75°C oil
- Standard color blue (custom colors available upon request)
- CSA Certified to CSA C22.2 No.56 under Files 51593 and MC157782
- CEC Hazardous locations: Class I Div. 2, Class II Div. 1 18-202 (4)(b), Class II Div. 2 18-252 (4), Class III Div. 1 18-302 (4), Class III Div. 2 18-352
- Meets -30°C Flexibility Test
- Meets -25°C Cold Impact Test

Applications

- Computer rooms
- OEM's
- Equipment builders
- CSA Equipment
- Where flexible connections are required

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS				
Product Code	Catalog Number	Trade Size in. (mm)	Coil Length (meters)	Reel Length (meters)	Approximate Weight (kg/meter)	Internal Diameter Min. mm(in.)	Internal Diameter Max. mm(in.)	External Diameter Max. mm(in.)	External Diameter Max. mm(in.)	Bend Radius mm(in.)
6301-21-00	CM4D0375M0030C	3/8 (12)	30	-	0.33	12.29 (0.484)	12.80 (0.504)	17.50 (0.690)	18.00 (0.710)	102 (4.0)
6301-80-00	CM4D0375M0300R	3/8 (12)	-	300	0.33	12.29 (0.484)	12.80 (0.504)	17.50 (0.690)	18.00 (0.710)	102 (4.0)
6302-21-00	CM4D0500M0030C	1/2 (16)	30	-	0.40	15.80 (0.622)	16.31 (0.642)	20.80 (0.820)	21.30 (0.840)	152 (6.0)
6302-35-00	CM4D0500M0150R	1/2 (16)	-	150	0.40	15.80 (0.622)	16.31 (0.642)	20.80 (0.820)	21.30 (0.840)	154 (6.0)
6302-80-00	CM4D0500M0300R	1/2 (16)	-	300	0.40	15.80 (0.622)	16.31 (0.642)	20.80 (0.820)	21.30 (0.840)	154 (6.0)
6303-21-00	CM4D0750M0030C	3/4 (21)	30	-	0.53	20.83 (0.820)	21.34 (0.840)	25.20 (1.030)	26.70 (1.050)	203 (8.0)
6303-35-00	CM4D0750M0150R	3/4 (21)	-	150	0.53	20.83 (0.820)	21.34 (0.840)	25.20 (1.030)	26.70 (1.050)	203 (8.0)
6303-80-00	CM4D0750M0300R	3/4 (21)	-	300	0.53	20.83 (0.820)	21.34 (0.840)	25.20 (1.030)	26.70 (1.050)	203 (8.0)
6304-21-00	CM4D1000M0030C	1 (27)	30	-	0.73	26.44 (1.041)	27.08 (1.066)	32.80 (1.290)	33.40 (1.315)	254 (10.0)
6304-35-00	CM4D1000M0150R	2 (27)	-	150	0.73	26.44 (1.041)	27.08 (1.066)	32.80 (1.290)	33.40 (1.315)	254 (10.0)
6305-15-00	CM4D1250M0015C	1-1/4 (35)	15	-	1.06	35.05 (1.380)	35.81 (1.410)	41.40 (1.630)	42.20 (1.660)	318 (12.5)
6305-75-00	CM4D1250M0075R	1-1/4 (35)	-	75	1.06	35.05 (1.380)	35.81 (1.410)	41.40 (1.630)	42.20 (1.660)	318 (12.5)
6306-15-00	CM4D1500M0015C	1-1/2 (41)	15	-	1.33	40.01 (1.575)	40.64 (1.600)	47.40 (1.865)	48.30 (1.900)	381 (15.0)
6306-57-00	CM4D1500M0045R	1-1/2 (41)	-	45	1.33	40.01 (1.575)	40.64 (1.600)	47.40 (1.865)	48.30 (1.900)	381 (15.0)
6307-15-00	CM4D2000M0015C	2 (53)	15	-	1.46	51.31 (2.020)	51.94 (2.045)	59.40 (2.340)	60.30 (2.375)	508 (20.0)
6307-21-00	CM4D2000M0030R	2 (53)	-	30	1.46	51.31 (2.020)	51.94 (2.045)	59.40 (2.340)	60.30 (2.375)	508 (20.0)
6308-08-00	CM4D2500M0008C	2-1/2 (63)	8	-	1.80	62.99 (2.480)	63.63 (2.505)	72.10 (2.840)	73.00 (2.875)	635 (25.0)
6309-08-00	CM4D3000M0008C	3 (78)	8	-	2.20	77.98 (3.070)	78.74 (3.100)	87.90 (3.460)	88.90 (3.500)	762 (30.0)
6310-08-00	CM4D4000M0008C	4 (103)	8	-	6.30	101.60 (4.000)	102.62 (4.040)	113.30 (4.460)	114.30 (4.500)	1016 (40.0)

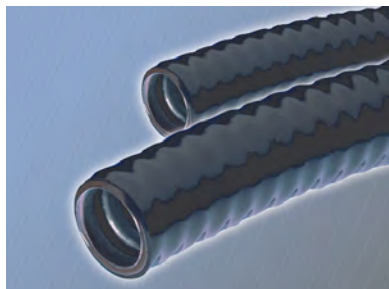
HYDROTITE™

HYDROTITE™ — Type "CSA"

Liquidtight Flexible Metal Conduit

Description

- Corrosion resistant hot-dipped galvanized zinc steel core
- FT-4 rated PVC jacket
- UV resistant
- Flexible in cold weather
- Sequential Print in meters printed on jacket
- Standard Color: Black. Additional colors available upon request



Specifications

- Temperature rating 75°C dry, 60°C wet, 75°C oil
- Standard color black (custom colors available upon request)
- CSA Certified to CSA C22.2 No.56 under Files 51593 and MC157782
- CEC Hazardous locations: Class I Div. 2, Class II Div. 1 18-202 (4)(b), Class II Div. 2 18-252 (4), Class III Div. 1 18-302 (4), Class III Div. 2 18-352
- Meets -30°C Flexibility Test CSA
- Meets -25°C Cold Impact Test CSA

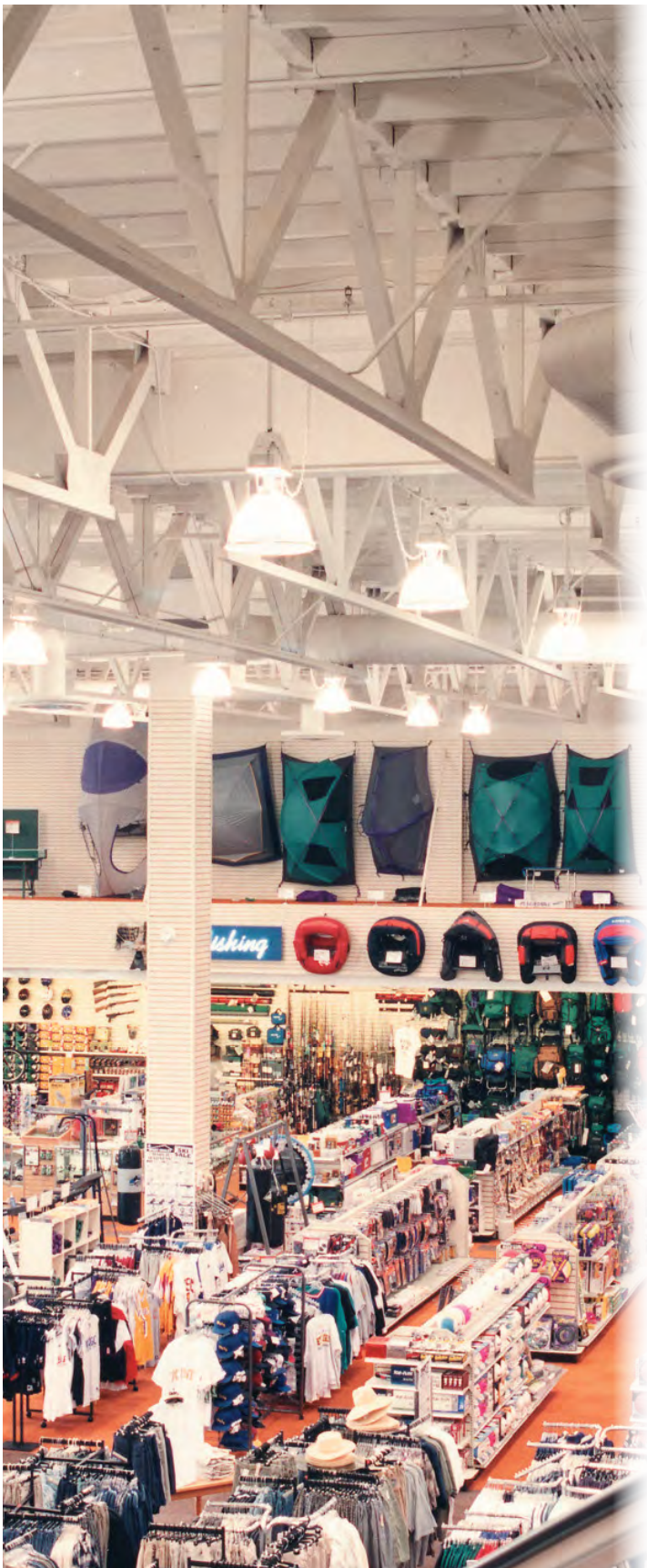
Applications

- OEM's
- Equipment builders
- CSA Equipment
- Where flexible connections are required

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS				
Product Code	Catalog Number	Trade Size in. (mm)	Coil Length (meters)	Reel Length (meters)	Approximate Weight (kg/meter)	Internal Diameter Min. mm(in.)	Internal Diameter Max. mm(in.)	External Diameter Max. mm(in.)	External Diameter Max. mm(in.)	Bend Radius mm(in.)
HC01-21-00	CSAC0375M0030C	3/8 (12)	30	-	0.33	12.29 (0.484)	12.80 (0.504)	17.50 (0.690)	18.00 (0.710)	102 (4.0)
HC01-80-00	CSAC0375M0300R	3/8 (12)	-	300	0.33	12.29 (0.484)	12.80 (0.504)	17.50 (0.690)	18.00 (0.710)	102 (4.0)
HC02-21-00	CSAC0500M0030C	1/2 (16)	30	-	0.40	15.80 (0.622)	16.31 (0.642)	20.80 (0.820)	21.30 (0.840)	152 (6.0)
HC02-35-00	CSAC0500M0150R	1/2 (16)	-	150	0.40	15.80 (0.622)	16.31 (0.642)	20.80 (0.820)	21.30 (0.840)	152 (6.0)
HC02-80-00	CSAC0500M0300R	1/2 (16)	-	300	0.40	15.80 (0.622)	16.31 (0.642)	20.80 (0.820)	21.30 (0.840)	152 (6.0)
HC03-21-00	CSAC0750M0030C	3/4 (21)	30	-	0.53	20.83 (0.820)	21.34 (0.840)	25.20 (1.030)	26.70 (1.050)	203 (8.0)
HC03-35-00	CSAC0750M0150R	3/4 (21)	-	150	0.53	20.83 (0.820)	21.34 (0.840)	25.20 (1.030)	26.70 (1.050)	203 (8.0)
HC03-80-00	CSAC0750M0300R	3/4 (21)	-	300	0.53	20.83 (0.820)	21.34 (0.840)	25.20 (1.030)	26.70 (1.050)	203 (8.0)
HC04-21-00	CSAC1000M0030C	1 (27)	30	-	0.73	26.44 (1.041)	27.08 (1.066)	32.80 (1.290)	33.40 (1.315)	254 (10.0)
HC04-35-00	CSAC1000M0150R	2 (27)	-	150	0.73	26.44 (1.041)	27.08 (1.066)	32.80 (1.290)	33.40 (1.315)	254 (10.0)
HC05-15-00	CSAC1250M0015C	1-1/4 (35)	15	-	1.06	35.05 (1.380)	35.81 (1.410)	41.40 (1.630)	42.20 (1.660)	318 (12.5)
HC05-75-00	CSAC1250M0075R	1-1/4 (35)	-	75	1.06	35.05 (1.380)	35.81 (1.410)	41.40 (1.630)	42.20 (1.660)	318 (12.5)
HC06-15-00	CSAC1500M0015C	1-1/2 (41)	15	-	1.33	40.01 (1.575)	40.64 (1.600)	47.40 (1.865)	48.30 (1.900)	381 (15.0)
HC06-57-00	CSAC1500M0045R	1-1/2 (41)	-	45	1.33	40.01 (1.575)	40.64 (1.600)	47.40 (1.865)	48.30 (1.900)	381 (15.0)
HC07-15-00	CSAC2000M0015C	2 (53)	15	-	1.46	51.31 (2.020)	51.94 (2.045)	59.40 (2.340)	60.30 (2.375)	508 (20.0)
HC07-21-00	CSAC2000M0030R	2 (53)	-	30	1.46	51.31 (2.020)	51.94 (2.045)	59.40 (2.340)	60.30 (2.375)	508 (20.0)
HC08-08-00	CSAC2500M0008C	2-1/2 (63)	8	-	1.80	62.99 (2.480)	63.63 (2.505)	72.10 (2.840)	73.00 (2.875)	635 (25.0)
HC09-08-00	CSAC3000M0008C	3 (78)	8	-	2.20	77.98 (3.070)	78.74 (3.100)	87.90 (3.460)	88.90 (3.500)	762 (30.0)
HC10-08-00	CSAC4000M0008C	4 (103)	8	-	6.30	101.60 (4.000)	102.62 (4.040)	113.30 (4.460)	114.30 (4.500)	1016 (40.0)

Flexible Metal Conduit

- Reduced Wall Flexible Steel Conduit49-50
- Reduced Wall Aluminum Flexible Metal Conduit51-52
- Extra Flexible Conduit 53
- Flexcon Extra-Flexible Steel Conduit 54
- Full Wall Flexible Metal Conduit..... 55
- Type "RAY-FLEX" CSA Aluminum Flexible Conduit 56
- AFC Fittings..... 57
- Electrical & Support Brands 58



Reduced Wall Flexible Steel Conduit Type RW FSC

Description

- Reduced Wall Flexible Steel Conduit
- High grade hot dipped zinc galvanized low carbon steel
- Interlocking design
- Corrosion resistant

Applications

- Flexible Steel Conduit (FSC): A raceway of circular cross-section made of helically wound, interlocked galvanized steel strip.
- Suitable for use in accordance with NEC® Article 348 Flexible Metal Conduit Type FMC
- Suitable for use in exposed and concealed locations
- Suitable for utilization equipment per NEC® 348.20(A)(2)(a)
- Suitable as part of a listed assembly per NEC® 348.20(A)(2)(b)
- Suitable for use as an equipment ground in accordance with NEC® 250.118(5)
- Suitable for use in Other Spaces Used for Environmental Air (Plenums) per NEC® 300.22(C)
- Suitable for use in Cable Trays per NEC® 392.10(A) and Table 392.10(A)
- Suitable raceway for Tap Conductors for Luminaires per NEC® 348.20(A)(2)(c) and 410.117(C)
- Suitable for use as a connection to a motor terminal enclosure per NEC® 430.223
- Suitable for use in Class I Division 2 per NEC® 501.10(B)(2)(1)
- Suitable for use in Neon Secondary-Circuit Wiring 1000V or Less per NEC® 600.31(A)
- Suitable for use in Neon Secondary-Circuit Wiring Over 1000V per NEC® 600.32(A)(1)
- Suitable for use in Manufactured Wiring Systems per 604.6(A)(2)
- Suitable for use in Elevators, Dumbwaiters, Escalators, Moving walks, Platform and Stairway Chairlifts per NEC® 620.21
- Suitable for use Under Raised Floors per NEC® 645.5(E)
- Suitable for use in Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Suitable for use in Fuel Cell Systems per NEC® 692.31
- Suitable for Wind Electric Systems per NEC® 694.30(A)
- Suitable for Critical Operations Power Systems (COPS) where flexibility is required per NEC® 708.10(C)(1)(3)
- Suitable for Optical Fiber Cables for installation within buildings per NEC® 770.110(A)(1)
- Suitable for Communications Circuit Wires and Cables for installation within buildings per NEC® 800.110(A)(1)
- Suitable for Community Antenna Television and Radio Coaxial Cables for installation within buildings per NEC® 820.110(A)(1)
- Suitable for Low and Medium Power Network-Powered Broadband Cables for installation within buildings per NEC® 830.110(A)(1)

References & Ratings

- NFPA 70 National Electric Code (NEC®) Articles 348, 250, 300, 392, 410, 423, 430, 501, 600, 604, 620, 645, 690, 692, 694, 708, 770, 800, 820 and 830
- UL 1 Standard for Flexible Metal Conduit UL File Number E11831
Federal Specification WW-C-566C
superseded by UL 1
- UL 1479 Fire Tests of Through-Penetration Firestops UL File Number R14141
UL Classified Through-Penetrating Product for Use in Through-Penetration Firestop Systems
- NEMA RV 3 Application and Installation Guidelines for Flexible and Liquidtight Flexible Metal Conduits
- C22.2 No. 56 CSA Standard for Flexible Metal Conduit and Liquid-Tight Flexible Metal Conduit
The 3/8 Trade Size is the only Type RW FMC that is CSA Certified

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx.Weight/ 100 feet (pounds)	Internal Diameter (min/max) inches	External Diameter (min/max) inches	Bend Radius inches (mm)
5501-22-00*	3/8	12	25'	—	17	0.375/0.393	0.560/0.610	2
5501-24-00*	3/8	12	50'	—	17	0.375/0.393	0.560/0.610	2
5501-30-00*	3/8	12	100'	—	17	0.375/0.393	0.560/0.610	2
5501-42-00*	3/8	12	250'	—	17	0.375/0.393	0.560/0.610	2
5501-45-00*	3/8	12	—	500'	17	0.375/0.393	0.560/0.610	2
5501-60-00*	3/8	12	—	1000'	17	0.375/0.393	0.560/0.610	2
5502-22-00	1/2	16	25'	—	27	0.625/0.645	0.860/0.920	3
5502-24-00	1/2	16	50'	—	27	0.625/0.645	0.860/0.920	3
5502-30-00	1/2	16	100'	—	27	0.625/0.645	0.860/0.920	3
5502-45-00	1/2	16	—	500'	27	0.625/0.645	0.860/0.920	3
5502-60-00	1/2	16	—	1000'	27	0.625/0.645	0.860/0.920	3
5503-22-00	3/4	21	25'	—	35	0.812/0.835	1.045/1.105	4
5503-24-00	3/4	21	50'	—	35	0.812/0.835	1.045/1.105	4
5503-30-00	3/4	21	100'	—	35	0.812/0.835	1.045/1.105	4
5503-45-00	3/4	21	—	500'	35	0.812/0.835	1.045/1.105	4
5503-60-00	3/4	21	—	1000'	35	0.812/0.835	1.045/1.105	4
5504-24-00	1	27	50'	—	51	1.000/1.040	1.300/1.380	5
5504-80-00	1	27	—	300'	51	1.000/1.040	1.300/1.380	5
5505-24-00	1-1/4	35	50'	—	63	1.250/1.300	1.550/1.630	6.25
5505-40-00	1-1/4	35	—	200'	63	1.250/1.300	1.550/1.630	6.25
5506-22-00	1-1/2	41	25'	—	76	1.500/1.575	1.850/1.950	7.50
5506-35-00	1-1/2	41	—	150'	76	1.500/1.575	1.850/1.950	7.50
5506-80-00	1-1/2	41	—	300'	76	1.500/1.575	1.850/1.950	7.50
5507-22-00	2	53	25'	—	100	2.000/2.080	2.350/2.450	10
5507-30-00	2	53	—	100'	100	2.000/2.080	2.350/2.450	10
5507-35-00	2	53	—	150'	100	2.000/2.080	2.350/2.450	10
5508-22-00	2-1/2	63	25'	—	165	2.500/—	2.860/3.060	12.5
5508-35-00	2-1/2	63	—	150'	165	2.500/—	2.860/3.060	12.5
5509-22-00	3	78	25'	—	197	3.000/—	3.360/3.560	15
5509-30-00	3	78	—	100'	197	3.000/—	3.360/3.560	15
5510-22-00	3-1/2	91	25'	—	230	3.500/—	3.860/4.060	17.5
5510-30-00	3-1/2	91	—	100'	230	3.500/—	3.860/4.060	17.5
5511-22-00	4	103	25'	—	263	4.000/—	4.360/4.560	20
5511-30-00	4	103	—	100'	263	4.000/—	4.360/4.560	20

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. *CSA certified. Review NEC® 348.60 and 250.118(5) for grounding requirements.
Review NEC® 348.60 and 250.118(5) for grounding requirements.

Reduced Wall Aluminum Flexible Metal Conduit Type RW FAC

Description

- Lightweight Reduced Wall Aluminum Flexible Conduit
- Premium aluminum alloy
- Interlocking design
- Proprietary lubricant and process providing a non-oil surface and product with extra flexibility

Applications

- Flexible Aluminum Conduit (FAC): A raceway of circular cross-section made of helically wound, interlocked aluminum strip.
- Suitable for use in accordance with NEC® Article 348 Flexible Metal Conduit Type FMC
- Suitable for use in exposed and concealed locations
- Suitable for utilization equipment per NEC® 348.20(A)(2)(a)
- Suitable as part of a listed assembly per NEC® 348.20(A)(2)(b)
- Suitable for use as an equipment ground in accordance with NEC® 250.118(5)
- Suitable for use in Other Spaces Used for Environmental Air (Plenums) per NEC® 300.22(C)
- Suitable for use in Cable Trays per NEC® 392.10(A) and Table 392.10(A)
- Suitable raceway for Tap Conductors for Luminaires per NEC® 348.20(A)(2)(c) and 410.117(C)
- Suitable for use as a connection to a motor terminal enclosure per NEC® 430.223
- Suitable for use in Class I Division 2 per NEC® 501.10(B)(2)(1)
- Suitable for use in Neon Secondary-Circuit Wiring 1000V or Less per NEC® 600.31(A)
- Suitable for use in Neon Secondary-Circuit Wiring Over 1000V per NEC® 600.32(A)(1)
- Suitable for use in Manufactured Wiring Systems per 604.6(A)(2)
- Suitable for use in Elevators, Dumbwaiters, Escalators, Moving walks, Platform and Stairway Chairlifts per NEC® 620.21
- Suitable for use Under Raised Floors per NEC® 645.5(E)
- Suitable for use in Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Suitable for use in Fuel Cell Systems per NEC® 692.31
- Suitable for Wind Electric Systems per NEC® 694.30(A)
- Suitable for Critical Operations Power Systems (COPS) where flexibility is required per NEC® 708.10(C)(1)(3)
- Suitable for Optical Fiber Cables for installation within buildings per NEC® 770.110(A)(1)
- Suitable for Communications Circuit Wires and Cables for installation within buildings per NEC® 800.110(A)(1)
- Suitable for Community Antenna Television and Radio Coaxial Cables for installation within buildings per NEC® 820.110(A)(1)
- Suitable for Low and Medium Power Network-Powered Broadband Cables for installation within buildings per NEC® 830.110(A)(1)

Ratings

- NFPA 70 National Electric Code (NEC®) Articles 348, 250, 300, 392, 410, 423, 430, 501, 600, 604, 620, 645, 690, 692, 694, 708, 770, 800, 820 and 830
- UL 1 Standard for Flexible Metal Conduit UL File Number E11831
Federal Specification WW-C-566C
superseded by UL 1
- UL 1479 Fire Tests of Through-Penetration Firestops UL File Number R14141
UL Classified Through-Penetrating Product
for Use in Through-Penetration
Firestop Systems
- NEMA RV 3 Application and Installation Guidelines for Flexible and Liquidtight Flexible Metal Conduits
- C22.2 No. 56 CSA Standard for Flexible Metal Conduit and Liquid-Tight Flexible Metal Conduit
The 3/8 Trade Size is the only Type RW FMC that is CSA Certified
- RR 93227 City of Los Angeles Electrical Testing Laboratory Research Report
Number 93227
Permits the use of 1/2 and 3/4 Trade Sizes of Type RW Flexible Aluminum Conduit in long lengths per the Report

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx.Weight/ 100 feet (pounds)	Internal Diameter (min/max) inches	External Diameter (min/max) inches	Bend Radius inches (mm)
5601-22-00*	3/8	12	25'	—	6	0.375/0.393	0.560/0.610	2
5601-24-00*	3/8	12	50'	—	6	0.375/0.393	0.560/0.610	2
5601-30-00*	3/8	12	100'	—	6	0.375/0.393	0.560/0.610	2
5601-42-00*	3/8	12	250'	—	6	0.375/0.393	0.560/0.610	2
5601-45-00*	3/8	12	—	500'	6	0.375/0.393	0.560/0.610	2
5601-60-00*	3/8	12	—	1000'	6	0.375/0.393	0.560/0.610	2
5602-22-00	1/2	16	25'	—	10	0.625/0.645	0.860/0.920	3
5602-24-00	1/2	16	50'	—	10	0.625/0.645	0.860/0.920	3
5602-30-00	1/2	16	100'	—	10	0.625/0.645	0.860/0.920	3
5602-45-00	1/2	16	—	500'	10	0.625/0.645	0.860/0.920	3
5602-60-00	1/2	16	—	1000'	10	0.625/0.645	0.860/0.920	3
5603-22-00	3/4	21	25'	—	12	0.812/0.835	1.045/1.105	4
5603-24-00	3/4	21	50'	—	12	0.812/0.835	1.045/1.105	4
5603-30-00	3/4	21	100'	—	12	0.812/0.835	1.045/1.105	4
5603-45-00	3/4	21	—	500'	12	0.812/0.835	1.045/1.105	4
5603-60-00	3/4	21	—	1000'	12	0.812/0.835	1.045/1.105	4
5604-24-00	1	27	50'	—	18	1.000/1.040	1.300/1.380	5
5604-80-00	1	27	—	300'	18	1.000/1.040	1.300/1.380	5
5605-24-00	1-1/4	35	50'	—	22	1.250/1.300	1.550/1.630	6.25
5605-40-00	1-1/4	35	—	200'	22	1.250/1.300	1.550/1.630	6.25
5606-22-00	1-1/2	41	25'	—	26	1.500/1.575	1.850/1.950	7.50
5606-35-00	1-1/2	41	—	150'	26	1.500/1.575	1.850/1.950	7.50
5606-80-00	1-1/2	41	—	300'	26	1.500/1.575	1.850/1.950	7.50
5607-22-00	2	53	25'	—	35	2.000/2.080	2.350/2.450	10
5607-30-00	2	53	—	150'	35	2.000/2.080	2.350/2.450	10
5607-35-00	2	53	—	150'	35	2.000/2.080	2.350/2.450	10
5608-22-00	2-1/2	63	25'	—	57	2.500/—	2.860/3.060	12.50
5608-35-00	2-1/2	63	—	150'	57	2.500/—	2.860/3.060	12.50
5609-22-00	3	78	25'	—	68	3.000/—	3.360/3.560	15
5609-30-00	3	78	—	100'	68	3.000/—	3.360/3.560	15
5610-22-00	3-1/2	91	25'	—	80	3.500/—	3.860/4.060	17.50
5610-30-00	3-1/2	91	—	100'	80	3.500/—	3.860/4.060	17.50
5611-22-00	4	103	25'	—	91	4.000/—	4.360/4.560	20
5611-30-00	4	103	—	100'	90	4.000/—	4.360/4.560	20

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. *CSA certified. Review NEC® 348.60 and 250.118(5) for grounding requirements. Review NEC® 348.60 and 250.118(5) for grounding requirements.

Extra Flexible Conduit

Description

- Non-UL Extra Flexible Steel Conduit
- High grade galvanized low carbon steel
- Interlocking design
- Corrosion resistant

Applications

- Flexible metal raceway for specific applications where UL and other agency approvals are not required
- Motor leads
- Made in USA of US and/or imported materials

ORDERING INFORMATION						PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight/ 100 feet (pounds)	Internal Diameter (min/max) inches	External Diameter (min/max) inches	Bend Radius inches (mm)
5201-42-00	3/8	12	250'	—	8	0.375/0.393	0.560/0.610	2
5201-45-00	3/8	12	—	500'	8	0.375/0.393	0.560/0.610	2
5201-60-00	3/8	12	—	1000'	8	0.375/0.393	0.560/0.610	2
5203-30-00	1/2	16	100'	—	16	0.625/0.645	0.860/0.920	3
5203-45-00	1/2	16	—	500'	16	0.625/0.645	0.860/0.920	3
5203-60-00	1/2	16	—	1000'	16	0.625/0.645	0.860/0.920	3
5204-30-00	3/4	21	100'	—	21	0.812/0.835	1.045/1.105	4
5205-24-00	1	27	50'	—	34	1.000/1.040	1.300/1.380	5
5206-24-00	1-1/4	35	50'	—	42	1.250/1.300	1.550/1.630	6.25
5207-22-00	1-1/2	41	25'	—	63	1.500/1.575	1.850/1.950	7.50
5208-22-00	2	53	25'	—	84	2.000/2.080	2.350/2.450	10
5209-22-00	2-1/2	63	25'	—	104	2.500/—	2.860/3.060	12.5
5210-22-00	3	78	25'	—	125	3.000/—	3.360/3.560	15
5211-22-00	3-1/2	91	25'	—	145	3.500/—	3.860/4.060	17.5
5212-22-00	4	103	25'	—	165	4.000/—	4.360/4.560	20

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.

Flexcon Extra-Flexible Steel Conduit

Description

AFC Cable Systems, Inc. FLEXCON EXTRA-FLEXIBLE STEEL CONDUIT is manufactured from one continuous length of high grade steel, hot dipped in a zinc bath for protection against the normal effects of corrosion. The steel strip is formed into interlocking convolutions firmly joined to assure a rugged yet very flexible conduit which provides exceptional flexibility for tight U-bend applications. The convolutions are manufactured to insure smoother interior and exterior surfaces, which facilitate both cable and conduit pulling. The FlexCon installs easily with standard armored cable or flexible metal conduit connectors. The product is designed to be used for specific applications where Underwriters Laboratories Inc. or other agency approvals are not required.

- Made in USA of US and/or imported materials

ORDERING INFORMATION					PRODUCT DIMENSIONS/BEND RADIUS		
Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Approx. Weight/ 100 feet (pounds)	Internal Diameter (min/max) inches	External Diameter (min/max) inches	Bend Radius inches (mm)
5101-24-00	3/8	12	50'	11.8	0.375/0.400	0.520/0.540	1.250
5101-30-00	3/8	12	100	11.8	0.375/0.400	0.520/0.540	1.250
5101-42-00	3/8	12	250	11.8	0.375/0.400	0.520/0.540	1.250
5102-24-00	1/2	16	50'	14.3	0.500/0.525	0.640/0.665	1.750
5102-30-00	1/2	16	100	14.3	0.500/0.525	0.640/0.665	1.750
5103-24-00	3/4	21	50'	19.9	0.750/0.775	0.890/0.915	2.000
5103-30-00	3/4	21	100	19.9	0.750/0.775	0.890/0.915	2.000

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.

Full Wall Steel Flexible Metal Conduit

Description

- Full wall flexible metal conduit
- High grade zinc galvanized low carbon steel
- Interlocked design
- Corrosion resistant
- Strongest metal conduit available

Applications

- Flexible Steel Conduit (FSC): A raceway of circular cross-section made of helically wound, interlocked galvanized steel strip.
- Suitable for use in accordance with NEC® Article 348 Flexible Metal Conduit Type FMC
- Suitable for use in exposed and concealed locations
- Suitable for utilization equipment per NEC® 348.20(A)(2)(a)
- Suitable as part of a listed assembly per NEC® 348.20(A)(2)(b)
- Suitable for use as an equipment ground in accordance with NEC® 250.118(5)
- Suitable for use in Other Spaces Used for Environmental Air (Plenums) per NEC® 300.22(C)
- Suitable for use in Cable Trays per NEC® 392.10(A) and Table 392.10(A)
- Suitable raceway for Tap Conductors for Luminaires per NEC® 348.20(A)(2)(c) and 410.117(C)
- Suitable for use as a connection to a motor terminal enclosure per NEC® 430.223
- Suitable for use in Class I Division 2 per NEC® 501.10(B)(2)(1)
- Suitable for use in Neon Secondary-Circuit Wiring 1000V or Less per NEC® 600.31(A)
- Suitable for use in Neon Secondary-Circuit Wiring Over 1000V per NEC® 600.32(A)(1)
- Suitable for use in Manufactured Wiring Systems per 604.6(A)(2)
- Suitable for use in Elevators, Dumbwaiters, Escalators, Moving walks, Platform and Stairway Chairlifts per NEC® 620.21
- Suitable for use Under Raised Floors per NEC® 645.5(E)
- Suitable for use in Solar Photovoltaic (PV) Systems per NEC® 690.31(A)
- Suitable for use in Fuel Cell Systems per NEC® 692.31
- Suitable for Wind Electric Systems per NEC® 694.30(A)
- Suitable for Critical Operations Power Systems (COPS) where flexibility is required per NEC® 708.10(C)(1)(3)
- Suitable for Optical Fiber Cables for installation within buildings per NEC® 770.110(A)(1)
- Suitable for Communications Circuit Wires and Cables for installation within buildings per NEC® 800.110(A)(1)

- Suitable for Community Antenna Television and Radio Coaxial Cables for installation within buildings per NEC® 820.110(A)(1)
- Suitable for Low and Medium Power Network-Powered Broadband Cables for installation within buildings per NEC® 830.110(A)(1)
- Suitable for use in accordance with CEC Rule 12-1000

References

- UL 1, File Reference E11831
- CSA C22.2 No. 56, CSA Certified File LL15035
- Federal Specification WW-C-566C, (now superseded by UL 1)
- NEC® 250.118(5), 300.22(C), 348, 430.223, 501.10(B)(2), 645.5
- Cable Tray installations per NEC®
- Environmental Air-Handling space installation NEC® 300.22(C)
- UL 1479 Classified 1, 2 and 3-hour Through-Penetration Fire Systems
UL File R14141
- Made in USA of US and/or imported materials

Ratings

NFPA 70	National Electric Code (NEC®) Articles 348, 250, 300, 392, 410, 423, 430, 501, 600, 604, 620, 645, 690, 692, 694, 708, 770, 800, 820 and 830
UL 1	Standard for Flexible Metal Conduit UL File Number E11831 Federal Specification WW-C-566C superseded by UL 1
UL 1479	Fire Tests of Through-Penetration Firestops UL File Number R14141 UL Classified Through-Penetrating Product for Use in Through-Penetration Firestop Systems
NEMA RV 3	Application and Installation Guidelines for Flexible and Liquidtight Flexible Metal Conduits
C22.1	Canadian Electrical Code, Part I – Safety Standard for Electrical Installations Rule 12-1000
C22.2 No. 56	CSA Standard for Flexible Metal Conduit and Liquid-Tight Flexible Metal Conduit Master Contract 157782, File Number LL15035

ORDERING INFORMATION

Product Code	Trade Size (inches)	Trade Size (mm)	Coil Length (feet)	Reel Length (feet)	Approx. Weight/ 100 feet (pounds)	Internal Diameter (min/max) inches	External Diameter (min/max) inches	Bend Radius inches (mm)
5402-30-00	1/2	16	100'	—	47	0.625/0.645	0.860/0.920	3
5402-45-00	1/2	16	—	500'	47	0.625/0.645	0.860/0.920	3
5402-60-00	1/2	16	—	1000'	47	0.625/0.645	0.860/0.920	3
5403-30-00	3/4	21	100'	—	60	0.812/0.835	1.045/1.105	4
5403-45-00	3/4	21	—	500'	60	0.812/0.835	1.045/1.105	4

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Review NEC® 348.60 and 250.118(5) for grounding requirements.

Type "RAY-FLEX" Aluminum Flexible Conduit

Description

- Heavy wall flexible aluminum conduit

Applications

- Flexible Aluminum Conduit (FAC): A raceway of circular cross-section made of helically wound, interlocked aluminum strip.
- Suitable for use in accordance with CEC Rule 12-1000 Rigid and Flexible Metal Conduit
- Suitable for installation in or on buildings or portions of buildings of either combustible or non-combustible construction per CEC 12-1002(1)
- Support shall be provided in accordance with CEC 12-1010(3)
- Suitable for use in hoistways per CEC 12-014(1)
- Suitable for Wiring under raised floors for data processing and similar systems per CEC 12-020(2)
- Suitable for use in Class I Zone 2 where flexibility is required per CEC 18.152(6)

Specifications

- CSA Certified to CSA C22.2 No.56
- UL 1
- Suitable for use in hazardous locations as per CEC Class I, Zone 2 & Div.2, Class II Div. 1 & 2, Class III Div. 1 & 2
- Made in USA of US and/or imported materials



Ratings

C22.1	Canadian Electrical Code, Part I – Safety Standard for Electrical Installations Rule 12-1000
C22.2 No. 56	CSA Standard for Flexible Metal Conduit and Liquid-Tight Flexible Metal Conduit Master Contract 157782, File Number LL15035
UL 1	Standard for Flexible Metal Conduit UL File Number E11831
NEC® Articles:	356, 390.15, 501.10(B)(2), 502.10(A)(2), 503.10(A)(2), 511.7(A)(1), 620.21, 645.5(D)(2), 680.21, 680.23, 680.25, 680.27, 680.42, 695.6(E) and 695.14(E)

ORDERING INFORMATION

PRODUCT DIMENSIONS/BEND RADIUS

Product Code	Catalog Number	Trade Size in.(mm)	Coil Length (meters)	Reel Length (meters)	Approximate Weight (kg/meter)	Internal Diameter Min. mm (In.)	Internal Diameter Max. mm (In.)	External Diameter Min. mm (In.)	External Diameter Max. mm (In.)	Bend Radius mm (in.)
5712-75-00	ALUC0312M0075W	5/16 (10)	75	-	0.09	7.92 (0.312)	N/A	11.94 (.470)	12.95 (0.510)	89 (3.5)
5712-80-00	ALUC0312M0300R	5/16 (10)	-	300	0.09	7.92 (0.312)	N/A	11.94 (.470)	12.95 (0.510)	89 (3.5)
5701-75-00	ALUC0375M0075W	3/8 (12)	75	-	0.10	9.53 (0.375)	9.98 (0.393)	14.22 (0.560)	15.49 (0.610)	102 (4.0)
5701-80-00	ALUC0375M0300R	3/8 (12)	-	300	0.10	9.53 (0.375)	9.98 (0.393)	14.22 (0.560)	15.49 (0.610)	102 (4.0)
5713-75-00	ALUC0437M0075W	7/16 (14)	75	-	0.11	11.10 (0.437)	N/A	N/A	17.15 (0.675)	114 (4.5)
5713-80-00	ALUC0437M0300R	7/16 (14)	-	300	0.11	11.10 (0.437)	N/A	N/A	17.15 (0.675)	114 (4.5)
5702-21-00	ALUC0500M0030W	1/2 (16)	30	-	0.25	15.88 (0.625)	16.38 (0.645)	21.84 (0.860)	23.37 (0.920)	152 (6.0)
5702-80-00	ALUC0500M0300R	1/2 (16)	-	300	0.25	15.88 (0.625)	16.38 (0.645)	21.84 (0.860)	23.37 (0.920)	152 (6.0)
5703-21-00	ALUC0750M0030W	3/4 (21)	30	-	0.30	20.62 (0.812)	21.21 (0.835)	26.54 (1.045)	28.07 (1.105)	203 (8.0)
5703-35-00	ALUC0750M0150R	3/4 (21)	-	150	0.30	20.62 (0.812)	21.21 (0.835)	26.54 (1.045)	28.07 (1.105)	203 (8.0)
5703-80-00	ALUC0750M0300R	3/4 (21)	-	300	0.30	20.62 (0.812)	21.21 (0.835)	26.54 (1.045)	28.07 (1.105)	203 (8.0)
5704-21-00	ALUC1000M0030W	1 (27)	30	-	0.47	25.40 (1.000)	26.42 (1.040)	33.02 (1.300)	35.05 (1.380)	254 (10.0)
5704-35-00	ALUC1000M0150R	2 (27)	-	150	0.47	25.40 (1.000)	26.42 (1.040)	33.02 (1.300)	35.05 (1.380)	254 (10.0)
5705-15-00	ALUC1250M0015W	1-1/4 (35)	15	-	0.58	31.75 (1.250)	33.02 (1.300)	39.37 (1.550)	41.40 (1.630)	318 (12.5)
5705-75-00	ALUC1250M0075R	1-1/4 (35)	-	75	0.58	31.75 (1.250)	33.02 (1.300)	39.37 (1.550)	41.40 (1.630)	318 (12.5)
5706-15-00	ALUC1500M0015W	1-1/2 (41)	15	-	0.76	38.10 (1.500)	40.00 (1.575)	46.99 (1.850)	49.53 (1.950)	381 (15.0)
5706-57-00	ALUC1500M0045R	1-1/2 (41)	-	45	0.76	38.10 (1.500)	40.00 (1.575)	46.99 (1.850)	49.53 (1.950)	381 (15.0)
5707-15-00	ALUC2000M0015W	2 (53)	15	-	0.98	50.80 (2.000)	52.83 (2.080)	59.69 (2.350)	62.23 (2.450)	508 (20.0)
5707-21-00	ALUC2000M0030R	3 (53)	-	30	0.98	50.80 (2.000)	52.83 (2.080)	59.69 (2.350)	62.23 (2.450)	508 (20.0)
5708-15-00	ALUC2500M0015W	2-1/2 (63)	15	-	1.46	63.50 (2.500)	N/A	72.64 (2.860)	77.72 (3.060)	635 (25.0)
5709-15-00	ALUC3000M0015W	3 (78)	15	-	1.67	76.20 (3.000)	N/A	85.34 (3.360)	90.42 (3.560)	762 (30.0)
5710-15-00	ALUC3500M0015W	3-1/2 (91)	15	-	1.89	88.90 (3.500)	N/A	98.04 (3.860)	103.12 (4.060)	889 (35.0)

AFC Fittings are Your Best Connection

From connectors for Type MC, AC and HCF cables, to flexible metal conduit and liquid-tight flexible conduits (metallic and nonmetallic) or steel EMT, Set Screw and Compression Fittings, AFC has just about any type of terminating means you require.

Armored Cable and Flexible Metal Conduit Connectors

- AFC Steel Box Connectors are design coordinated with AC & MC Cable and Flex from AFC Cable Systems



Parking Deck and Parking Lot Cable

- Reasonably priced connectors that are appropriate for use with PVC Jacket MC cable (Parking Deck/Lot Cable™)



Malleable Liquidtight Insulated and Uninsulated Fittings

- Designed and engineered to ensure excellent performance thanks to its heavy-duty, impact resistant construction



Nonmetallic Liquidtight Connectors

- Available in one-piece or traditional multi-piece configurations



Snap-Lok Flexible Metal Conduit Connectors

- Quality spring steel construction for maximum reliability and vibration resistance making it ideal for machine-fed installations



Steel Setscrew Connectors and Couplings

- Durable one-piece assembly available with or without insulated throats



Steel Compression Connectors and Couplings

- Strong steel construction available with or without insulated throats



Raintight Compression Fittings

- Inner sealing gland prevents moisture from entering the conduit





Conduit Systems	Cable Systems	Cable Tray Systems	Framing Systems
Steel Conduit - E-Z Pull® & True Color™ EMT - EMT Elbows - IMC - Rigid (GRC) - GRC Elbows, Nipples & Couplings Kwik Products - Kwik-Fit® EMT (built-in set-screw coupling) - Kwik-Couple® IMC/GRC (built-in rotating coupling) - Kwik-Fit® Compression EMT Aluminum Conduit - Rigid - Aluminum Elbows - Aluminum Couplings PVC - Schedule - 40 & 80 Rigid PVC - EB/DB Duct - PVC Elbows - Fittings, Spacers & Accessories	AC & MC Cable - MC TUFF® Lightweight Steel (MC) Cable - MC TUFF® IG (MC) Cable with Isolated Ground - MC Lite® Metal Clad Aluminum (MC) Cable - MC-Quik® (MC) Cable - MC-Stat® (MC) Cable - MC-Plus® (MC) Cable - HCF-90® & HCF-Lite™ - AC-90® & AC-Lite™ - Fire Alarm® Cable - Home Run Cable® - Parking Deck/Lot Cable® - Super Neutral Cable® Flexible Conduit - LIQUID-TUFF® Liquid-Tight Flexible Conduit - Full and Reduced Wall Flexible Metal Conduit AFC Fittings - EMT Steel Compression & Set-Screw Fittings - Liquid-Tight Metallic & Non-Metallic Fittings - MC/AC Cable Connectors AFC Accessories - Light, Power, & Appliance Whips - Bare Armored Ground	Aluminum Tray - Aluminum Ladder Tray - Aluminum Trof Tray - Aluminum Channel - Aluminum Fittings Steel Tray - Steel Ladder Tray - Steel Trof Tray - Steel Channel - Steel Fittings I-Beam™ Cable Tray - I-BEAM™ Aluminum Tray - I-BEAM™ Accessories Fiberglass Tray - Cope-glas™ Fiberglass Tray - Fiberglass Fittings - Fiberglass Support Systems Other Cope Products - Covers - Barrier Strips - Grounding Equipment - Seismic Hold-Downs - Support Systems Wire Basket - Wire Basket Tray - Wire Basket Accessories	Channel - Steel Channel - Aluminum Channel - Stainless Steel Channel - Fiberglass Channel - Junior Channel Fittings & Accessories - Beam Clamps - Channel Fittings - Pipe & Conduit Clamps - Threaded Rods - Fiberglass Fittings - Electrical Fittings - Concrete Inserts - Trolley Systems Finishes - Pre-Galvanized Channel - Green Channel - Hot-Dip Galv. Channel - Gold Channel - Unistrut Defender™ Channel Gratings Roof Walks Solar Products Telestrut® Telescoping Strut System UniPier® Rooftop Supports
Conduit Systems Canada	Modular Wiring Systems	PVC	
All items listed above, plus - Aluminum Nipples and except for the following: - IMC - Kwik-Couple IMC - PVC	ACS / Uni-Fab - Modular Lighting Systems - Raised Floor Assemblies - Pre-Fab Assemblies	PVC - Schedule - 40 & 80 Rigid PVC - EB/DB Duct - PVC Elbows - Fittings, Spacers & Accessories	

AFC Liquidtight

RED LIQUIDTIGHT

- Fire Alarm
- Security
- Emergency Circuitry

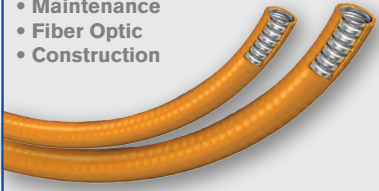


APPLICATIONS



ORANGE LIQUIDTIGHT

- Maintenance
- Fiber Optic
- Construction

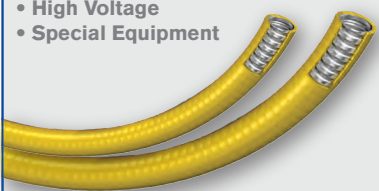


APPLICATIONS



YELLOW LIQUIDTIGHT

- High Voltage
- Special Equipment

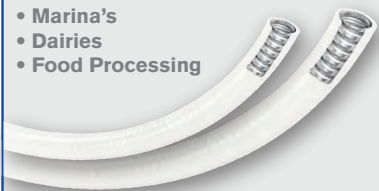


APPLICATIONS

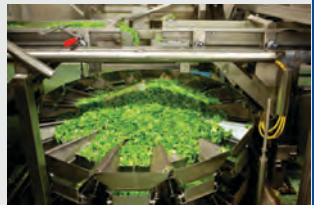


WHITE LIQUIDTIGHT

- Marina's
- Dairies
- Food Processing

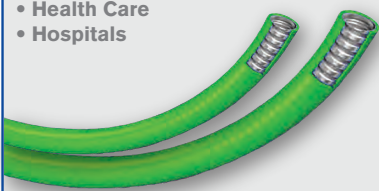


APPLICATIONS

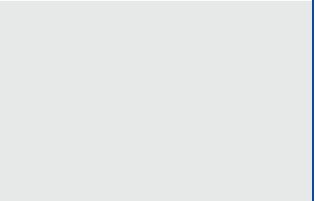


GREEN LIQUIDTIGHT

- Health Care
- Hospitals

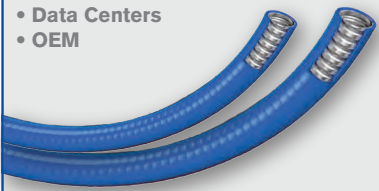


APPLICATIONS

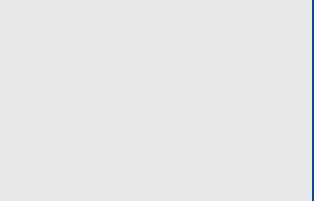


BLUE LIQUIDTIGHT

- Data Centers
- OEM

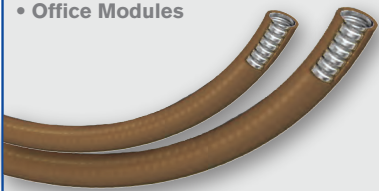


APPLICATIONS

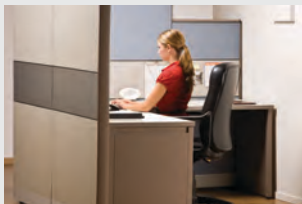


BROWN LIQUIDTIGHT

- Office Modules

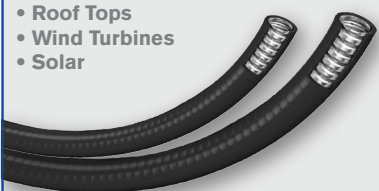


APPLICATIONS



BLACK LIQUIDTIGHT

- Roof Tops
- Wind Turbines
- Solar



APPLICATIONS



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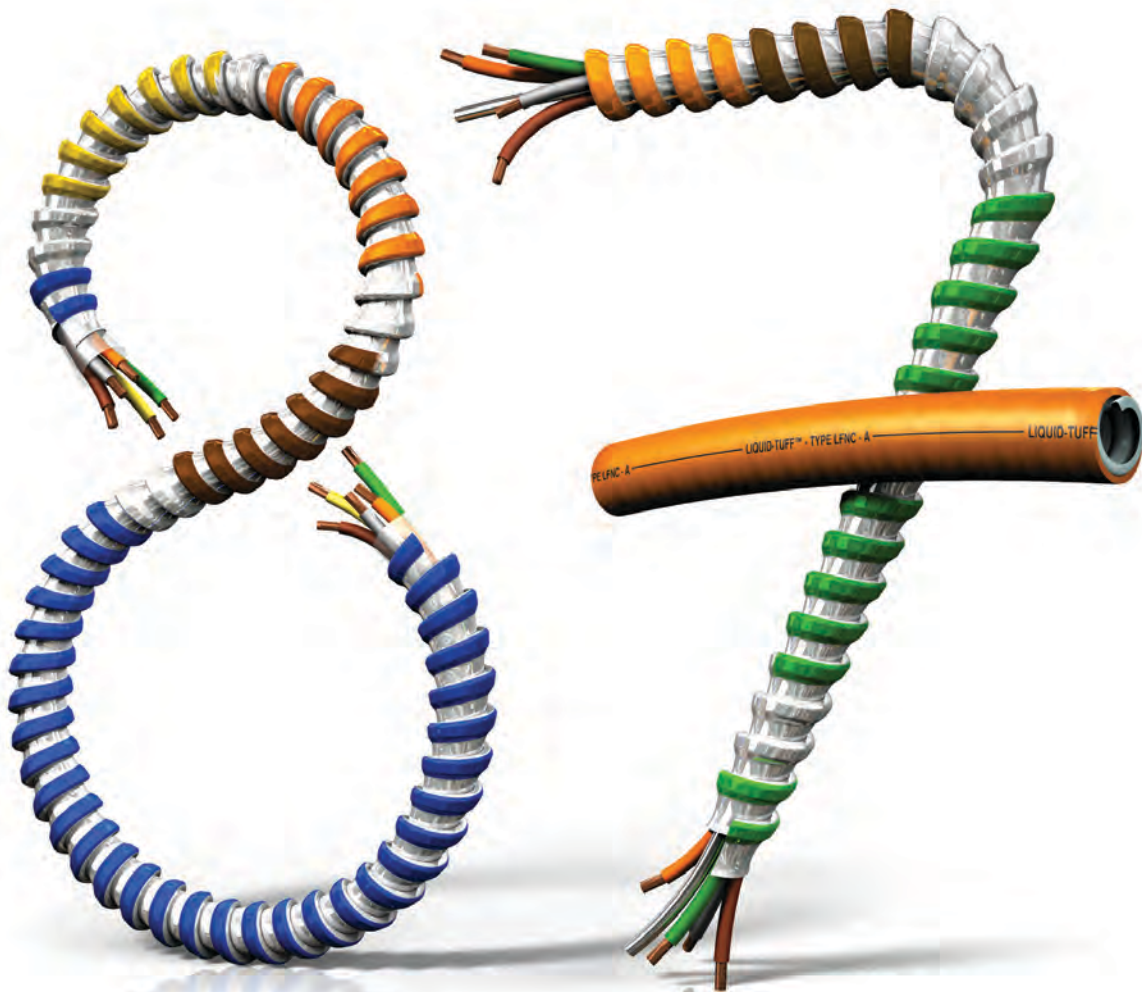
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