

LIQUID-TUFF™

UL Hi-Low Temperature Liquidtight Flexible Steel Conduit, Type LFMC

Description

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

Temperature Rating

- 105°C/221°F Dry
- -55°C/-67°F Low temperature
- 60°C Wet
- 70°C Oil resistant

Applications

- High temperature use
- Machine tool wiring applications
- Ideal for cold climate installations
- 600 volt and lower circuits
- Direct burial and concrete embedment
- Bond wire for grounding in sizes 3/8" – 1/4" NEC® 250.118(6)
- Hazardous locations per NEC® 501
- Site lighting and other outdoor wiring jobs



References & Ratings

- UL 360 File E26540
- NEC® 250.118(6), 350.60, 390.15, 501.10(B)(2), 502.10(A)(2), 503.10(A)(2), 511.7(A)(1), 620.21 (A)(d), 645.5(D)(2), 680.21, 680.42, 695.6(E) and 695.14(E)
- Department of Defense UL 360 adopted on October 1, 1987

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	1½	35	50'	–	105	1.540/1.570	1.630/1.660	1.380/1.410	8
6906-24-00	1½	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	2½	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	3½	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.

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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 Type 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 Type Hi-Low 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: Grey

Grounding

Permanent circuit ground protection is provided through the continuous bonding strip built into the conduit core in sizes 3/8" through 1¼". A separate grounding conductor is required by the NEC® for trade sizes 1½" 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 Standards

UL 360	Standard for Liquidtight Flexible Steel Conduit
File Reference(s):	UL E26540
NEC® Articles:	250.118(6), 350.60, 350.60, 390.15, 501.10(B)(2), 502.10(A)(2), 503.10(A)(2), 511.7(A)(1), 645.5(D)(2), 680.21, 680.42, 695.6(E) and 695.14(E)

Department of Defense Adopted UL 360 on October 1, 1987

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Table 2
Jacket Thickness

Conduit Trade		Minimum 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
1¼	35	0.035
1½	41	0.040
2	53	0.040
2½	63	0.050
3	78	0.050
3½	91	0.060
4	103	0.060

Appendix A

UL Performance Tests

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

Table 3
Conduit Diameters
Acceptable Internal and External Diameters

Conduit Size		Internal Diameter, In.		Over Conduit, In.		Over Jacket, In.	
Trade Size, In.	Metric Designator	Min.	Max.	Min.	Max.	Min.	Max.
3/8	12	0.484	0.504	0.594	0.614	0.690	0.710
1/2	16	0.622	0.642	0.732	0.765	0.820	0.840
3/4	21	0.820	0.840	0.930	0.960	1.030	1.050
1	27	1.041	1.066	1.201	1.226	1.290	1.315
1¼	35	1.380	1.410	1.540	1.570	1.630	1.660
1½	41	1.575	1.600	1.735	1.770	1.865	1.900
2	53	2.020	2.045	2.180	2.215	2.340	2.375
2½	63	2.480	2.505	2.640	2.675	2.840	2.875
3	78	3.070	3.100	3.295	3.335	3.460	3.500
3½	91	3.500	3.540	3.720	3.789	3.960	4.000
4	103	4.000	4.040	4.220	4.280	4.460	4.500