



Technical Specifications

LIQUID-TUFF™

Non-UL Oil Resistant/High Temperature Liquidtight Flexible Steel Conduit

Page 1 of 2

Scope

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF™ Non-UL Oil Resistant/High Temperature Liquidtight Flexible Steel Conduit designed for use as a raceway for power, control and communication cables. 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.

Ordering Information Page 15



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.

**Table 2
Jacket Thickness**

Trade Size	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

The finished product dimensions shall be in accordance with 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 2.

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.

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Page 2 of 2



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

Appendix A

Performance Tests

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