

Technical Specifications

LIQUID-TUFF™

UL High Temperature

Liquidtight Flexible Non-Metallic Conduit (Type LFNC-B)

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Scope

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF™ UL High Temperature Liquidtight Flexible Non-Metallic Conduit (Type LFNC-B) designed for use in wet, dry or oily locations as a flame resistant, non-metallic raceway for power, control and communications cables in compliance with Article 356 of the National Electrical Code. The product is 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 through 2-inch trade sizes for direct burial, outdoor and sunlight resistance use. This Liquidtight Flexible Non-Metallic Conduit is manufactured and tested in accordance with Underwriters Laboratories Inc. Standard UL 1660. The product carries the UL Listing Mark.

Construction

Liquidtight Flexible Non-Metallic Conduit, Type LFNC-B is a raceway of circular cross section with a smooth polyvinyl chloride (PVC) inner surface and an integral reinforcing member within the conduit wall. The wall thicknesses and dimensions of the integral conduit shall comply with Table 6.4 of UL 1660 which are summarized in Table 1.

Grounding

A separate Grounding conductor is required by the National 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 UL 1660.

Performance Tests

The completed UL LIQUID-TUFF™ Liquidtight Flexible Non-Metallic Conduit, Type LFNC-B shall meet all of the performance requirements contained in UL 1660 and outlined in Appendix A.

- Package lengths in excess of 100' contain splices; these splices must be cut out before use.

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Reference Standards

UL 1660	Standard for Liquidtight Flexible Non-Metallic Conduit
UL File References	UL E123464
NEC® Articles:	356, 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, 680.23, 680.25, 680.27, 680.42, 695.6(E) and 695.14(E)





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Table 1

Conduit Size		Inside Diameter, In.		Outside Diameter, In.		Min. Bend Radii, In.	Weight lbs/100ft
Trade Size, In.	Metric	Min.	Max.	Min.	Max.		
3/8	(12)	0.484	0.504	0.690	0.710	1.5	12
1/2	(16)	0.622	0.642	0.820	0.840	1.8	13
3/4	(21)	0.820	0.840	1.030	1.050	3.0	18
1	(27)	1.041	1.066	1.290	1.315	4.0	27
1¼	(35)	1.380	1.410	1.630	1.660	6.0	35
1½	(41)	1.575	1.600	1.865	1.900	6.5	48
2	(53)	2.020	2.045	2.340	2.375	11.5	70

- Package lengths in excess of 100' contain splices; these splices must be cut out before use.

Appendix A

UL Performance Tests

Physical Properties for 105°C:

- Original Tensile and Elongation
- Air Oven Aging Test
- Oil Immersion Test
- Deformation

Tension

Flexibility (Room and Low Temperature)

Vertical Flame

Room Temperature Impact

Secureness of Fittings

Mechanical Water Absorption

Moisture Penetration Test

Durability of Ink

Sunlight Resistance

Crush Test

Pipe Stiffness for Direct Burial