



CABLE SYSTEMS<sup>®</sup>

# LIQUID-TUFF™ – FLEXIBLE LIQUIDTIGHT CONDUIT CATALOG

Industrial & Commercial Liquidtight Conduit • Flexible Metal Conduit

A PART OF



# **AFC's Flexible Liquidtight Conduit**

AFC Cable Systems<sup>®</sup> is pleased to announce the launch of our new UL Liquidtight Flexible Steel Conduit Type LFMC NSF<sup>®</sup> 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<sup>™</sup> 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 54.

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.







## LIQUID-TUFF<sup>™</sup> Non-UL Extreme Temperature Liquidtight Flexible Metal Conduit

#### 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**

- \*  $150^{\circ}C/302^{\circ}F$  Dry Intermittent use
- 135°C/275°F Dry Continuous use
- 60°C Oily 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



#### **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

|                 | Trade            | Trade        | Coil             | Reel  | Approx.<br>Weight/   | External Diameter (inches) | Internal<br>Diameter | Bend               |  |
|-----------------|------------------|--------------|------------------|-------|----------------------|----------------------------|----------------------|--------------------|--|
| Product<br>Code | Size<br>(inches) | Size<br>(mm) | ze Length Length |       | 100 feet<br>(pounds) | Over Jacket<br>(min/max)   | (min/max)<br>inches  | Radius<br>(inches) |  |
| 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      | 11⁄4             | 35           | 50'              | -     | 52                   | 1.630/1.660                | 1.380/1.410          | 8                  |  |
| 6805-40-00      | 11⁄4             | 35           | -                | 200'  | 52                   | 1.630/1.660                | 1.380/1.410          | 8                  |  |
| 6806-24-00      | 11/2             | 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      | 21/2             | 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      | 31/2             | 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                 |  |

## **Ordering Information**

### **Product Dimensions/Bend Radius**

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

Not for grounding.



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

#### Scope

This specification covers AFC Cable Systems, Inc. LIQUID-TUFF<sup>™</sup> Non-UL EXTREME TEMPERATURE Liquidtight, Flexible Metal Conduit designed for use where operation at a high temperature is required. The product is appropriate for intermittent use at 150°C (302°F) and continuous use at 135°C (275°F) in a dry location, 60°C in a wet location or 60°C in an oily location. The LIQUID-TUFF<sup>™</sup> 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 filed 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<sup>®</sup> D-746. The wall thickness is in conformance with Table 1. Jacket: Black

720-Hour Xenon-Arc sunlight/weather resistance - 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.

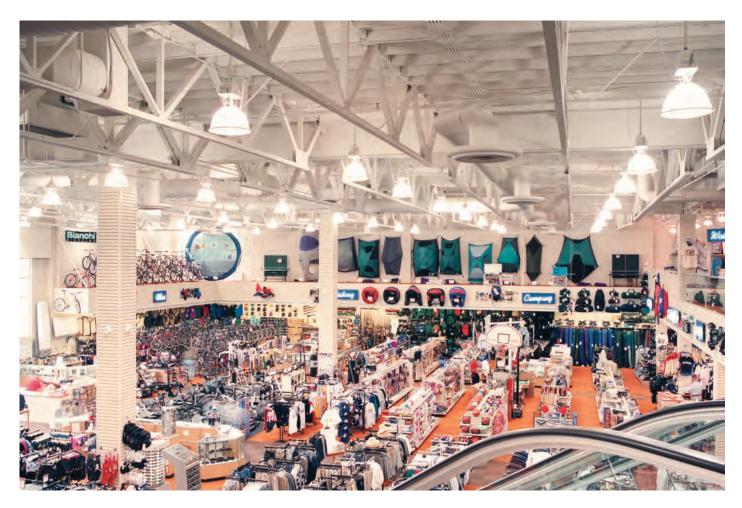


### Table 1 Jacket Thickness

| Cor<br>Trade Size | nduit Trade<br>Metric Designator | Minimum Acceptable Average<br>Thickness of Jacket, (inches) |  |  |  |
|-------------------|----------------------------------|---|--|--|--|
| 3/8               | 12                               | 0.030   |  |  |  |
| 1/2               | 16                               | 0.030   |  |  |  |
| 3/4               | 21                               | 0.035   |  |  |  |
| 1                 | 27                               | 0.035   |  |  |  |
| 11⁄4              | 35                               | 0.035   |  |  |  |
| 11⁄2              | 41                               | 0.040   |  |  |  |
| 2                 | 53                               | 0.040   |  |  |  |
| 21/2              | 63                               | 0.050   |  |  |  |
| 3                 | 78                               | 0.050   |  |  |  |
| 31/2              | 91                               | 0.060   |  |  |  |
| 4                 | 103                              | 0.060   |  |  |  |



# **Flexible Metal Conduit**



### **Flexible Metal Conduit**

| Reduced Wall Flexible Steel Conduit           | .40 |
|---|-----|
| Reduced Wall Aluminum Flexible Metal Conduit  | 41  |
| Extra Flexible Conduit                        | .42 |
| Flexcon Extra-Flexible Steel Conduit          | .43 |
| Full Wall Flexible Metal Conduit              | .44 |
| Type "RAY-FLEX" CSA Aluminum Flexible Conduit | .45 |
| AFC Fittings                                  |     |



## **Extra Flexible Conduit**

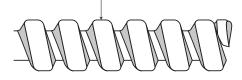
#### Description

- 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

Interlocking Steel Armor



### **Ordering Information**

### Product Dimensions/ Bend Radius

| Product<br>Code | Trade<br>Size<br>(inches) | Trade<br>Size<br>(mm) | Coil<br>Length<br>(feet) | Reel<br>Length<br>(feet) | Approx.<br>Weight/<br>100 feet<br>(pounds) | Internal<br>Diameter<br>(min/max)<br>inches | External<br>Diameter<br>(min/max)<br>inches | Bend<br>Radius<br>(inches) |
|-----------------|---------------------------|-----------------------|--------------------------|--------------------------|--|---|---|----------------------------|
| 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                    | <mark>100'</mark>        | _                        | <mark>21</mark>                            | 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      | 11⁄4                      | 35                    | 50'                      | _                        | 42   | 1.250/1.300                                 | 1.550/1.630                                 | 6.25                       |
| 5207-22-00      | 11/2                      | 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      | 21/2                      | 63                    | 25'                      | _                        | 104  | 2.500/                                      | 2.860/3.060                                 | 12.50                      |
| 5210-22-00      | 3                         | 78                    | 25'                      | _                        | 125  | 3.000/                                      | 3.360/3.560                                 | 15                         |
| 5211-22-00      | 31/2                      | 91                    | 25'                      | _                        | 145  | 3.500/                                      | 3.860/4.060                                 | 17.50                      |
| 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.



## Built to Protect and Defend.



## AFC Liquid-Tuff<sup>™</sup> 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



AFC CABLE SYSTEMS®



960 Flaherty Drive New Bedford, MA 02745 PHONE / 508 - 998 - 1131 TOLL-FREE / 800 - 757 - 6996

www.afcweb.com

