

Material Standards

256348.1 Fiberglass Conduit Bends

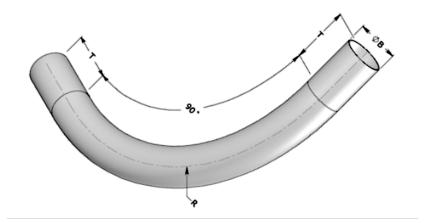
Revision 3 Feb 22, 2016

1. Scope

This material standard covers the requirements for halogen-free reinforced thermosetting resin conduit (RTRC) bends rated for above ground use.

2. Material ID Numbers

This material standard applies to the items listed in Table 1:



Material ID Number	IPS Trade Size (in)	Bend (deg)	Radius (in)	Straight Length at Ends (in)	Avg. Outside Diameter (in)	Nominal Weight (lb)	Min. Impact Resistance (ft-lb)
1001070	2	22.5	24	6	2.375	1.46	40
256322	2	45	24	6	2.375	1.59	40
256330	3	45	24	6	3.5	4.15	70
256348	4	45	48	6	4.5	3.96	120
256356	6	45	60	6	6.625	8.15	200
256306	2	90	12	6	2.375	1.807	40
256520	2	90	24	6	2.375	2.31	40
256538	3	90	24	6	3.5	5.10	70
256546	4	90	48	6	4.5	7.76	120
256562	6	90	48	6	6.625	13.26	200
256570	6	90	60	6	6.625	14.40	200

3. Referenced Standards

Except as modified herein, the items covered by this material standard shall meet the applicable requirements of the latest revision of the following standard:

UL 2515 & NEMA TC-14 AG Reinforced Thermosetting Resin Conduit (RTRC) and Fittings



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4. Dimensions

All items covered by this material standard shall have the applicable dimensions and tolerances specified in UL 2515 except as otherwise modified herein.

5. Properties and Specifications

Dielectric Strength exceed 400 volts/mil per ASTM D 149

Tensile strength exceed 9,000 psi per ASTM D 2105

Coefficient of thermal expansion less than 1.5×10-5 in/in/°F per ASTM D 696

6. Bend Bodies

- **6.1** Bends shall be made of reinforced thermosetting resin material.
- 6.2 Bends must be IPS type and 4" and 6" shall be rated heavy wall (HW).
- 6.3 Bends shall have a 6-inch minimum straight section at each end for coupling to conduit.
- **6.4** Bends shall be pigmented black.

7. Couplings

- 7.1 Each bend shall be provided with a coupling attached to each end.
- 7.2 Couplings shall be untapered Schedule 40 PVC deep socket.
- **7.3** Couplings shall be bonded to the conduit using adhesive that has a minimum ultimate shear strength of 500 psi when tested with ASTM D-2517.
- **7.4** The inside diameter and length shall be measured as indicated in Figure 2 and have the dimensions listed in Table 2.

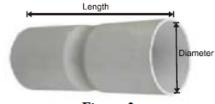


Figure 2

8. Identification

Each bend shall be identified with the manufacturer's name or trademark, material design, and wall type.

9. Inspection and Test

The materials purchased under this material standard are subject to inspection and test upon receipt in accordance with the referenced standards.



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IPS Trade Size (in)	Min. Length (in)	Min Inside Diameter (in)	Max Inside Diameter (in)
2	6.0	2.394	2.406
3	8.0	3.530	3.546
4	9.0	4.535	4.553
6	12.0	6.676	6.698

Table 2

10. Rejection and Replacement

- **10.1** Failure to meet the requirements of this material standard shall, at the discretion of the District, constitute grounds for rejection of the lot as received in whole or in part.
- **10.2** The supplier shall, at the supplier's own expense, replace any rejected conduit, bends or couplings with an equal amount complying with this material standard.

11. Packaging

Bends shall be shipped on shrink wrapped enclosed wooden pallets suitable for handling with fork lifting equipment.

Bends of different radius or bending degrees shall be shipped on separate pallets.