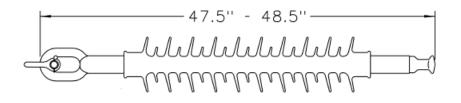


Material Standards 1000016.1 115kV Polymer Suspension Insulators

Revision 1 Dec 31, 2014

1. Scope

This specification applies to the District's requirements for composite, non-ceramic, polymeric suspension insulators for deadending conductors on a 115kV electrical transmission system. The polymeric covering, including the weathersheds, shall be made of silicone rubber.



2. Reference Standards

Insulators shall conform to the latest revisions of the following standards.

Industry Standards		
ANSI C29.11 - 2012	Composite Insulator Test Methods	
ANSI C29.12 - 2013	Composite Suspension Type Insulators	
ASTM A-153 - 09	Standard Specification for Zinc Coating (Hot- Dip) on Iron and Steel Hardware	
District Standards		
Compatible Unit I0701	Insulator, Polymer Suspension w/ Anchor Shackle	

3. Material ID Numbers

This specification applies to the following District Material ID number: 1000016



4. Ratings

Physical Specifications		
Section Length	47.5" min - 48.5" max	
Weathershed Diameter	3.625" min	
Core Diameter	0.650" min	
Color	Sky Gray, ANSI 70	
Minimum Mechanical Specifications		
Specified Mechanical Load (SML) (lbs)	25,000 lb	
Routine Tension Load (RTL)	12,500 lb	
Minimum Electrical Specifications		
Arcing Distance	32"	
Leakage Distance (inches)	78"	
Dry Flashover 60 Hz (kV RMS)	355 kV	
Wet Flashover 60 Hz (kV RMS)	310 kV	

5. Construction

All parts of the fiberglass rod shall be completely covered with the same silicone rubber polymeric material as the weathersheds. The entire length of the polymeric covering, including the weathersheds, shall be one continuous, seamless piece of material. Weathersheds shall retain their original shape after severe deformation. Weathersheds shall shed water whether mounted horizontally or vertically and shall be self-cleaning with rain.

6. Corona Ring

All insulators shall have the ability to be easily retrofitted with a corona ring.

7. End Fittings

Each insulator shall be equipped with a Ball and Eye end fitting as specified for ANSI Class 52-5 insulators. End-fittings shall have sealant applied to protect against moisture penetration. End-fittings may be constructed of high strength aluminum alloy or malleable or ductile iron, galvanized per ASTM A-153, latest revision.

8. Identification

Each insulator shall be permanently marked with the manufacturer's name or logo and the date of manufacture. Each insulator shall be marked with the specified mechanical load rating (SML) with appropriate units. The markings shall be legible and durable. Packages containing multiple insulators shall be marked with the manufacturer's name, the type of insulator and the insulator part number.