SWITCHBOARD WIRE, POLYETHYLENE INSULATED

1. **Scope:** This specification covers single-conductor, flame-resistant polyethylene switchboard wire suitable for operation at conductor temperatures of 90 C or less, in dry locations, at a maximum voltage rating of 600 volts, and shall be listed by Underwriters' Laboratories as suitable for switchboard use.

2. **Conductor:** The conductors shall be coated copper, meeting the requirements of ICEA S-61-402 (NEMA WC 5), Section 2.1.1.3.

3. **Insulation:** The insulation shall be a 30-mil extruded wall of heat and light-stabilized, chemically cross-linked, polyethylene, dark gray in color. When tested in accordance with Part 6 of ICEA S-61-402, the insulation shall meet the following requirements:

   3.1 Physical properties of unaged polyethylene tensile strength, lbs. per square inch minimum 1500
   Elongation at rupture, minimum percent 400

   3.2 Physical properties after accelerated aging test, air oven test at 121° ± 1° for 7 days, tensile strength, minimum percentage of unaged value 70
   Elongation at rupture, minimum percentage of unaged value 70

   3.3 Minimum Thickness - The minimum thickness of the insulation shall be not less than 90 percent of the 30-mil average thickness.

4. **Stripping:** The insulation shall strip free from the conductor.

5. **Flame Test:** A 22-inch specimen of the insulated wire shall meet the vertical flame test requirement of ICEA S-61-402, Section 6.5.

6. **Voltage Test:** The insulation shall withstand 1500 volts AC supplied for 5 minutes between the conductor and a layer of metal foil wrapped over a 6-inch section of the test specimen.

7. **Identification:** The wire shall have a readily-identifiable permanent outside marking to indicate the manufacturer's trade name and UL Type SIS insulation. This marking shall be continuous throughout the entire length of the wire.

8. **Packaging:** The wire shall be packaged on 500 foot reels. Boxes are not acceptable.

9. **Reference Specification:** ICEA S-61-402/NEMA WC5, Thermoplastic-Insulated Wire and Cable, latest revision

10. **Purchase Unit:** 500-ft. reel

11. **Stock Unit:** FT

Stock Number	Size, AWG	Conductor Stranding	Approximate OD, in.	Net Weight/ lbs. per 500-ft. Reel
~~642063~~	~~12~~	obsolete	~~0.15~~	~~14~~
~~642080~~	~~18~~	obsolete	~~0.11~~	~~06~~
642082	14	41	0.14	10
642083	12	65	0.16	14
642084	10	105	0.17	21

STANDARDS COORDINATOR	STANDARDS SUPERVISOR	UNIT DIRECTOR
John Barnett	John Barnett	John Nierenberg