



Specification: PV – RHW 2KV

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1.0 Scope: This specification describes single conductor crosslinked polyethylene (XLP or XLPE) dual listed as Types Photovoltaic (PV – 1000V & 2000V), types RHH, RHW, RHW-2 2kv (2000 volts), and USE-2 (600 volts). It is suitable for interconnection wiring of grounded and ungrounded photovoltaic power systems and is approved for use as described in Article 310 and Section 690.31(A) and other applicable sections of the National Electrical Code (NEC), NFPA 70. This conductor is approved for Direct Burial, RoHS Compliant, -40°C Sunlight Resistant, VW-1, Oil and Gasoline Resistant Cat II, and rated for an operating temperature of -40 to 90 degrees C in wet and 105 degrees C in dry locations.

2.0 Applicable Standards:

- 2.1 Underwriters Laboratories (UL) Subj. 4703 Photovoltaic Wire, UL 44 Thermoset Cables, UL 854 for Type USE
- 2.2 ASTM B-1, B-3, B-8, B33, B172 and B-173 for copper conductors
- 2.3 ICEA S-95-658/NEMA WC70, ICEA S-66-524/NEMA WC7 Cross Linked Polyethylene Insulated Wire&Cable, UL 854 for Service Entrance Cables (incl. Para. 854-38.7 for 300 hr. sunlight resistance), UL 66 Fixture Wire, NEC Section 690.31

3.0 Conductors: The single copper conductors shall be stranded bare annealed or tin coated copper per UL 44, 66, 83, 854, 1581, 2556 and together with ASTM requirements.

4.0 Insulation: The conductor shall be insulated with XLP as specified and applied tightly to the conductor in a concentric manner. These conductors are “Oil and Gasoline Resistant II” and rated and identified “**Sunlight Resistant**”. The minimum at any point shall not be less than 90% of the specified average thickness in compliance with UL 854 and 44.

5.0 Identification: The wire shall be identified in compliance with UL requirements by surface marking indicating the manufacturer, conductor size, UL symbol, temp rating, type RHW-2 (2KV), VW-1, “Sun Res”, -40° C and USE-2 or “PV Wire or Photovoltaic Wire” type designation (2000V).

6.0 Packaging: Standard length spools have 500 or 2500 feet. Custom lengths are available.

7.0 Testing: The wire shall be continuously spark tested at 12.5KV or as the UL 44 Table 42 specifies. Other electrical and mechanical tests shall be in accordance with UL 44, UL 854, UL 1581 and UL 2556.

8.0 Product Data: * 18 and 16 AWG are not recognized by UL as RHW-2 or USE-2; it is UL PV (2000 volt).

AWG	Standard Number of Strands	Extra Flexible Stranding	Insulation Thickness Mils	Nominal Overall Diameter – Inches (standard strands)	Approx. Shipping Wgt. (Lbs./Mft.)
*18	16	16	75	0.20"	23
*16	26	26	75	0.21"	27
14	7	41	75	0.22"	33
12	7	65	75	0.24"	43
10	7	37 or 105	75	0.27"	59
8	7	133	85	0.30"	88
6	7	133	85	0.36"	124
4	7	19 or 133	85	0.41"	180
2	7	133	85	0.46"	265
1	19	133	105	0.54"	342
1/0	19	133	105	0.58"	418

Non-standard STRANDING, COLORS, and CUSTOM PACKAGING are available by quotation.