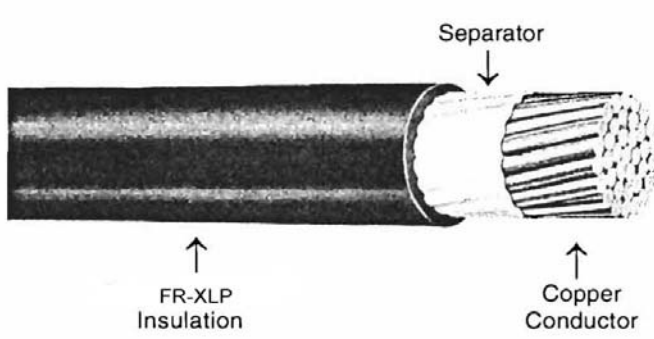


# VW-1 XHHW-2

## FR-XLP Insulation, 600 Volts

<p><b>APPLICATION:</b></p> <ol style="list-style-type: none"> <li>1. General purpose wiring for lighting and power - residential, commercial, industrial buildings in accordance with National Electrical Code, maximum conductor temperature of 90°C in wet or dry locations, 600 volts, for installation in conduit or other recognized raceways where a cable having superior flame retardance is required.</li> <li>2. Suitable for use in low leakage circuits requiring a dielectric constant of 3.5 or less, such as isolated circuits supplying anesthetizing locations per Article 517.160 of the NEC.</li> <li>3. Suitable for use as low leakage inductive (loop) vehicle detector wire in accordance with state and municipal requirements.</li> </ol> <p><b>STANDARDS:</b></p> <ol style="list-style-type: none"> <li>1. Listed by UL as Type XHHW-2 per Standard 44.</li> <li>2. Listed by UL as Gasoline and Oil Resistant II.</li> <li>3. All sizes carry the VW-1 flame test designation.</li> <li>4. Cables are UL listed as Sunlight Resistant (1/0 AWG and larger, black only).</li> <li>5. Size 1/0 AWG and larger UL listed For CT Use.</li> <li>6. Cables pass IEEE 1202/CSA FT4 (70000 BTU/hr) cable tray flame test.</li> <li>7. Cables conform to ICEA S-95-658/NEMA WC70, utilizing Column B thicknesses.</li> </ol> <p><b>CONSTRUCTION:</b> Annealed copper conductor, FR-XLP thermosetting flame retardant chemically crosslinked polyethylene insulation, surface printed.</p>	 <p style="text-align: center;">↑ FR-XLP Insulation</p> <p style="text-align: center;">↑ Copper Conductor</p>
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USAWC Part #	Size AWG or kcmil	No. of Strands	Insulation Thickness Mills	Nom. Diam. Inches	Ampacity*		Weight lbs/1000 ft	
					75°C	90°C	Net	Copper
14-01XHHW2VW1	14	7	30	.14	20	25	21	13
12-01XHHW2VW1	12	7	30	.16	25	30	31	20
10-01XHHW2VW1	10	7	30	.18	35	40	45	32
8-01XHHW2VW1	8	7	45	.24	50	55	71	50
6-01XHHW2VW1	6	7	45	.28	65	75	105	81
4-01XHHW2VW1	4	7	45	.32	85	95	160	129
2-01XHHW2VW1	2	7	45	.38	115	130	240	205
1-01XHHW2VW1	1	19	55	.44	130	150	305	258
1/0-01XHHW2VW1	1/0	19	55	.48	150	170	380	326
2/0-01XHHW2VW1	2/0	19	55	.52	175	195	470	411
3/0-01XHHW2VW1	3/0	19	55	.58	200	225	580	518
4/0-01XHHW2VW1	4/0	19	55	.63	230	260	725	653
250-01XHHW2VW1	250	37	65	.70	255	290	860	772
300-01XHHW2VW1	300	37	65	.75	285	320	1020	926
350-01XHHW2VW1	350	37	65	.80	310	350	1185	1081
400-01XHHW2VW1	400	37	65	.85	335	380	1345	1235
500-01XHHW2VW1	500	37	65	.93	380	430	1665	1544
600-01XHHW2VW1	600	61	80	1.04	420	475	2040	1853
750-01XHHW2VW1	750	61	80	1.14	475	535	2515	2316
1000-01XHHW2VW1	1000	61	80	1.29	545	615	3310	3086

\*Ampacity in accordance with NEC for not more than three conductors in raceway at the conductor temperature indicated, in wet or dry locations, 30 C ambient temperature.

## Specification

### VW-1 XHHW-2

### FR-XLP Insulation, 600 Volts

#### 1. SCOPE

- 1.1 This specification describes single conductor FR-XLP, Type XHHW-2, a general purpose building wire insulated with flame-retardant crosslinked polyethylene intended for lighting and power circuits at 600 volts or less, in residential, commercial and industrial buildings. Other applications include highway inductive loop sensors or isolated circuits supplying anesthetizing locations per Article 517.160 of the National Electrical Code. The wire may be operated at 90°C maximum continuous conductor temperature in wet or dry locations and is listed by Underwriters Laboratories for use in accordance with Article 310 of the National Electric Code. All cables comply with UL's VW-1 (Vertical-Wire) Flame Test. Cables pass IEEE 1202/CSA FT4 (70000 BTU/hr) cable tray flame test. Sizes 1/0 AWG and larger may be used in cable tray in accordance with Article 392 of the NEC.

#### 2. APPLICABLE STANDARDS

- 2.1 The following standards form a part of this specification to the extent specified herein:
  - 2.1.1 Underwriters Laboratories Standard 44 for Rubber Insulated Wires and Cables.
  - 2.1.2 ICEA Pub. No. S-95-658, NEMA Pub. No. WC70 for Nonshielded Power Cables Rated 2000 Volts or Less.

#### 3. CONDUCTORS

- 3.1 Conductors shall be Class B stranded annealed uncoated copper per UL Standard 44.

#### 4. SEPARATOR

- 4.1 A suitable separator over the conductor may be used at the option of the manufacturer.

#### 5. INSULATION

- 5.1 Each conductor shall be insulated with FR-XLP, a flame retardant crosslinked polyethylene complying with the physical and electrical requirements of UL Standard 44 for Type XHHW-2. In addition, the FR-XLP insulation shall comply with the For CT Use (sizes 1/0 AWG and larger) and VW-1 flame test ratings and the Gasoline and Oil Resistant II ratings of UL Standard 44.
- 5.2 The insulation shall maintain a dielectric constant of 3.5 or less.
- 5.3 The average thickness of insulation shall be as specified in UL Standard 44 for Type XHHW-2. The minimum thickness at any point shall be not less than 90% of the specified average thickness. The insulation shall be applied tightly to the conductor and shall be free-stripping.

#### 6. IDENTIFICATION

- 6.1 The wire shall be identified by surface marking indicating manufacturer's identification, conductor size and metal, voltage rating, UL symbol, VW-1, type designation, Gasoline and Oil Resistant II and Sunlight Resistant For CT Use (1/0 AWG and larger).

#### 7. TESTS

- 7.1 Wire shall be tested in accordance with the requirements of UL Standard 44 for Type XHHW-2.

#### 8. LABELS

- 8.1 The wire shall bear the Underwriters Laboratories label for Type XHHW-2.