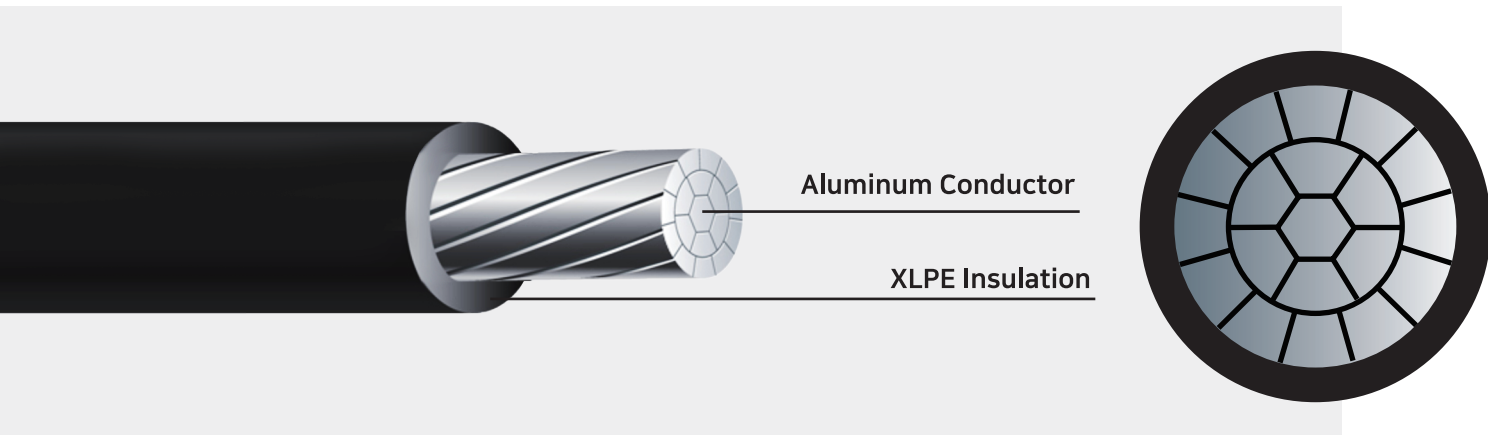


Thermoset-Insulated Wires and Cables



Aluminum XHHW-2



Description

XHHW-2 wires are primarily designed for installation in conduit systems or approved raceways, catering to services, feeders, and branch circuit wiring as specified in the National Electrical Code. These conductors, categorized as XHHW-2, are suitable for use in both wet and dry environments, with a maximum temperature limit of 90 degrees Celsius. The voltage rating of XHHW-2 conductors is either 600 or 1000 volts. VW-1 flame rated and cable tray rated for 1/0 AWG and larger.

Application

- General purpose wiring of commercial/residential buildings
- Used in conduit or raceways
- Feeder wiring
- Branch circuit wiring

Conductors

- Compact bare AA-8000 series aluminum alloy conductors, Class B stranded as per ASTM.

Insulation

- Abrasion, heat, moisture, and flame resistant cross-linked polyethylene (XLPE) insulation.

Standards

- UL 44 Thermoset-Insulated Wires and Cables
- ASTM B801 & B836
- Sunlight Resistant
- VW-1 Rated
- CT Rated (for 1/0 AWG and larger)

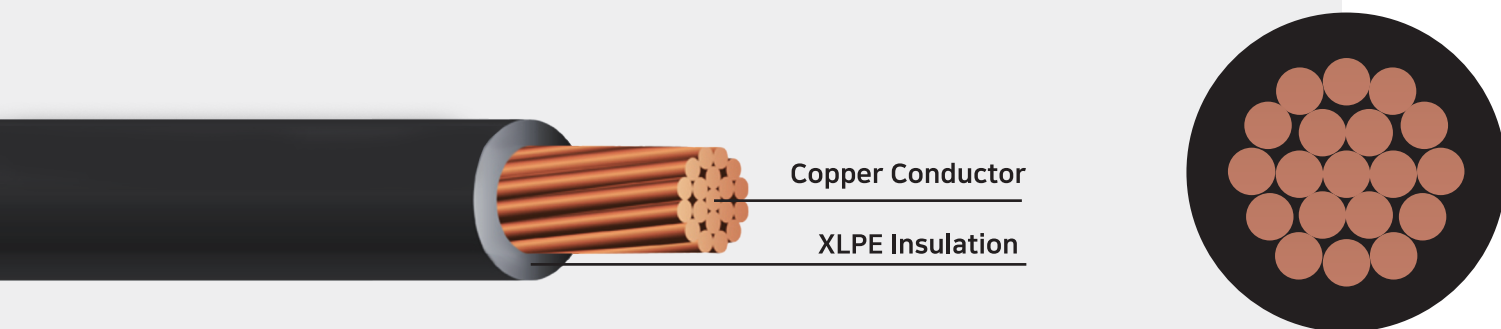
Conductor Size	Conductor Diameter		Insulation Thickness		Overall Diameter		Net Weight	Ampacity at 75 C	Ampacity at 90 C
AWG or kcmil	inches	mm	inches	mm	inches	mm	lbs/kft		
8 AWG	0.134	3.40	0.045	1.14	0.224	5.69	30	40	45
6	0.169	4.29	0.045	1.14	0.259	6.58	42	50	55
4	0.213	5.41	0.045	1.14	0.303	7.70	58	65	75
3	0.238	6.05	0.045	1.14	0.328	8.33	72	75	85
2	0.268	6.81	0.045	1.14	0.358	9.09	86	90	100
1	0.299	7.59	0.055	1.40	0.409	10.39	110	100	115
1/0	0.336	8.53	0.055	1.40	0.446	11.33	134	120	135
2/0	0.376	9.55	0.055	1.40	0.486	12.34	163	135	150
3/0	0.423	10.74	0.055	1.40	0.533	13.54	200	155	175
4/0	0.475	12.07	0.055	1.40	0.585	14.86	247	180	205
250 kcmil	0.520	13.21	0.065	1.65	0.650	16.51	296	205	230
300	0.570	14.48	0.065	1.65	0.700	17.78	359	230	260
350	0.616	15.65	0.065	1.65	0.746	18.95	401	250	280
400	0.659	16.74	0.065	1.65	0.789	20.04	453	270	305
500	0.736	18.69	0.065	1.65	0.866	22.00	556	310	350
600	0.813	20.65	0.080	2.03	0.973	24.71	679	340	385
700	0.877	22.28	0.080	2.03	1.037	26.34	782	375	425
750	0.908	23.06	0.080	2.03	1.068	27.13	833	385	435
800	0.938	23.83	0.080	2.03	1.098	27.89	883	395	445
900	0.999	25.37	0.080	2.03	1.159	29.44	983	425	480
1000	1.060	26.92	0.080	2.03	1.220	30.99	1,090	445	500

► All values are nominal and subject to correction.

Thermoset-Insulated Wires and Cables



Copper XHHW-2



Description

XHHW-2 cables serve as the primary choice for distributing power within conduit or other designated raceways, as outlined in the National Electrical Code. They are suitable for both wet and dry environments, with conductor temperatures capped at 90 degrees Celsius. These cables are versatile, approved for use in free air, raceways, or cable trays, adhering to the standards set by the National Electrical Code. XHHW-2 cables are rated for voltages of either 600V or 1000V.

Application

- General purpose wiring of commercial/residential buildings
- Used in conduit or raceways
- Feeder wiring
- Branch circuit wiring

Conductors

- Compressed soft drawn bare copper conductors with class B stranded as per ASTM B8.

Insulation

- Abrasion, heat, moisture, and flame resistant cross-linked polyethylene (XLPE) insulation.

Standards

- UL 44 Thermoset-Insulated Wires and Cables
- ASTM B8
- Sunlight Resistant
- VW-1 Rated
- CT Rated (for 1/0 AWG and larger)

Conductor Size AWG or kcmil	No. of Strands	Insulation Thickness		Overall Diameter		NetWeight lbs/kft	Ampacity at 90 C
		inches	mm	inches	mm		
14 AWG	7	0.030	0.76	0.13	3.30	17	25
12	7	0.030	0.76	0.15	3.81	26	30
10	7	0.030	0.76	0.18	4.57	38	40
8	7	0.045	1.14	0.24	6.10	65	55
6	7	0.045	1.14	0.28	7.11	99	75
4	7	0.045	1.14	0.33	8.38	152	95
2	7	0.045	1.14	0.39	9.91	233	130
1	19	0.055	1.40	0.44	11.18	293	145
1/0	19	0.055	1.40	0.48	12.19	364	170
2/0	19	0.055	1.40	0.53	13.46	453	195
3/0	19	0.055	1.40	0.58	14.73	565	225
4/0	19	0.055	1.40	0.63	16.00	706	260
250 kcmil	37	0.065	1.65	0.70	17.78	837	290
300	37	0.065	1.65	0.75	19.05	1,044	319
350	37	0.065	1.65	0.80	20.32	1,157	350
400	37	0.065	1.65	0.85	21.59	1,342	380
500	37	0.065	1.65	0.93	23.62	1,634	430
600	61	0.080	2.03	1.04	26.42	1,972	475
750	61	0.080	2.03	1.15	29.21	2,448	535

► All values are nominal and subject to correction.

Thermoset-Insulated Wires and Cables



Aluminum RHW-2/USE-2



Description

Type RHW-2 or USE-2 conductors can be used with conduit in accordance with the specifications outlined in the National Electrical Code. When designated as Type USE-2, these conductors are deemed appropriate for underground service entrance applications, permitting direct burial. Whether employed as RHW-2 or USE-2, conductor temperatures should be below 90 degrees Celsius in both wet and dry environments.

Application

- Used in conduit or raceways
- Underground service entrance cables (USE-2)

Conductors

- Compact bare AA-8000 series aluminum alloy conductors, Class B stranded as per ASTM.

Insulation

- Abrasion, heat, moisture, and flame resistant cross-linked polyethylene (XLPE) insulation.

Standards

- UL 44 Thermoset-Insulated Wires and Cables
- UL 854 Service Entrance Cables (USE-2)
- ASTM B801
- Sunlight Resistant
- VW-1 Rated
- CT Rated (for 1/0 AWG and larger)

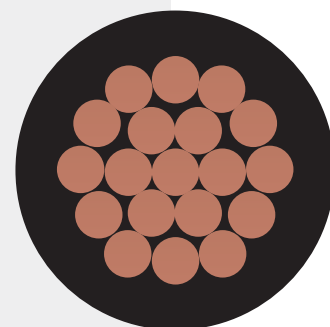
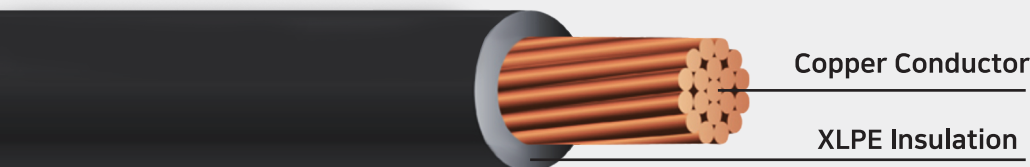
Conductor Size	Conductor Diameter		Insulation Thickness		Overall Diameter		Net Weight	Ampacity at 90 C
	inches	mm	inches	mm	inches	mm		
8 AWG or kcmil								
8 AWG	0.134	3.40	0.060	1.52	0.254	6.45	36	45
6	0.169	4.29	0.060	1.52	0.289	7.34	49	55
4	0.213	5.41	0.060	1.52	0.333	8.46	65	75
3	0.240	6.10	0.060	1.52	0.360	9.14	78	85
2	0.268	6.81	0.060	1.52	0.388	9.86	94	100
1	0.299	7.59	0.080	2.03	0.459	11.66	126	115
1/0	0.335	8.51	0.080	2.03	0.495	12.57	151	135
2/0	0.378	9.60	0.080	2.03	0.538	13.67	182	150
3/0	0.423	10.74	0.080	2.03	0.583	14.81	221	175
4/0	0.476	12.09	0.080	2.03	0.636	16.15	269	205
250 kcmil	0.520	13.21	0.095	2.41	0.710	18.03	326	230
300	0.571	14.50	0.095	2.41	0.761	19.33	381	260
350	0.614	15.60	0.095	2.41	0.804	20.42	435	280
400	0.657	16.69	0.095	2.41	0.847	21.51	489	305
500	0.736	18.69	0.095	2.41	0.926	23.52	595	350
750	0.909	23.09	0.110	2.79	1.129	28.68	881	435
1000	1.059	26.90	0.110	2.79	1.279	32.49	1,145	500

► All values are nominal and subject to correction.

Thermoset-Insulated Wires and Cables



Copper RHW-2/USE-2



Description

Type RHW-2 or USE-2 conductors can be used with conduit according to the specifications outlined in the National Electrical Code. When employed as Type USE-2, the conductor is deemed suitable for underground service entrance cable, allowing for direct burial. In the case of RHW-2 or USE-2 applications, conductor temperatures should not surpass 90 degrees Celsius in either wet or dry environments.

Application

- Used in conduit or raceways
- Underground service entrance cables (USE-2)

Conductors

- Compressed soft drawn bare copper conductors with class B stranded as per ASTM B8

Insulation

- Abrasion, heat, moisture, and flame resistant cross-linked polyethylene (XLPE) insulation.

Standards

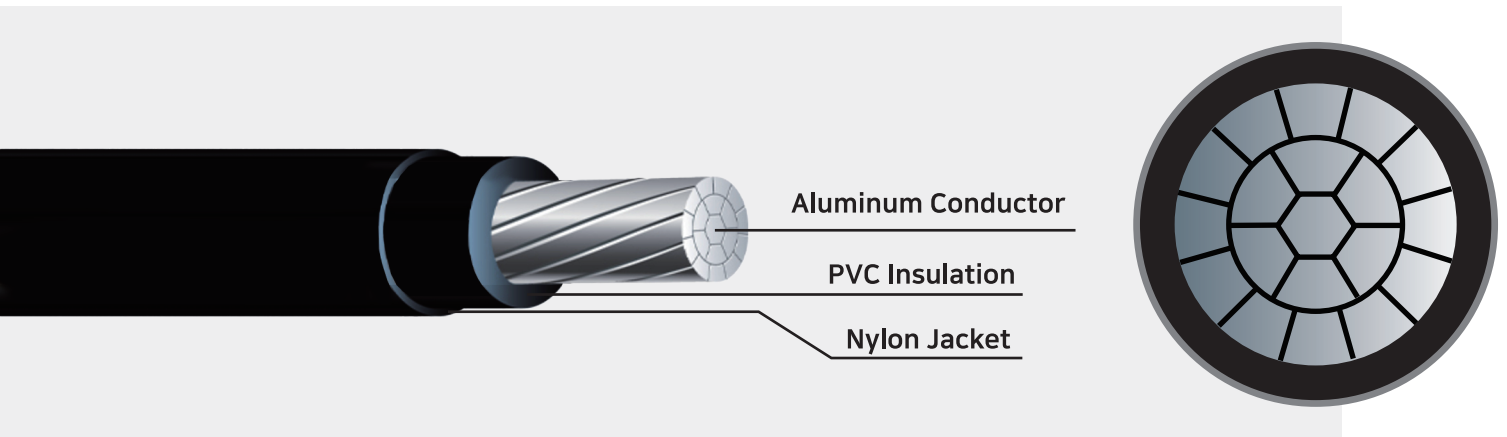
- UL 44 Thermoset-Insulated Wires and Cables
- UL 854 Service Entrance Cables (USE-2)
- ASTM B8
- Sunlight Resistant
- VW-1 Rated
- CT Rated (for 1/0 AWG and larger)

Conductor Size	No. of Strands	Insulation Thickness		Overall Diameter		Net Weight	Ampacity at 90 C
		inches	mm	inches	mm	lbs/kft	
14 AWG	7	0.045	1.14	0.163	4.14	21	25
12	7	0.045	1.14	0.182	4.62	30	30
10	7	0.045	1.14	0.205	5.21	43	40
8	7	0.060	1.52	0.263	6.68	69	55
6	7	0.060	1.52	0.301	7.65	103	75
4	7	0.060	1.52	0.350	8.89	156	95
2	7	0.060	1.52	0.404	10.26	238	130
1	19	0.080	2.03	0.476	12.09	307	145
1/0	19	0.080	2.03	0.517	13.13	384	170
2/0	19	0.080	2.03	0.562	14.27	476	195
3/0	19	0.080	2.03	0.610	15.49	590	225
4/0	19	0.080	2.03	0.669	16.99	735	260
250 kcmil	37	0.095	2.41	0.762	19.35	868	290
350	37	0.095	2.41	0.866	22.00	1,192	350
500	37	0.095	2.41	0.986	25.04	1,673	430
750	61	0.110	2.79	1.205	30.61	2,493	520
1000	61	0.110	2.79	1.370	34.80	3,292	615

► All values are nominal and subject to correction.

Thermoplastic-Insulated Wires and Cables

Aluminum THHN/THWN-2



Description

THHN or THWN-2 building wire serves general-purpose applications and is authorized for both new construction and rewiring projects up to 600 volts. THHN is applicable for dry environments solely, maintaining temperatures below 90 degrees Celsius, whereas THWN-2 is adaptable to wet or dry conditions, also up to 90 degrees Celsius. Installation of the cable is recommended without using pulling lubricant.

Application

- General purpose wiring for new construction and rewiring projects
- Used in dry or wet locations

Conductors

- Compact bare AA-8000 series aluminum alloy conductors, Class B stranded as per ASTM.

Insulation

- Abrasion, heat, and moisture resistant polyvinyl chloride (PVC) insulation with nylon jacket.

Standards

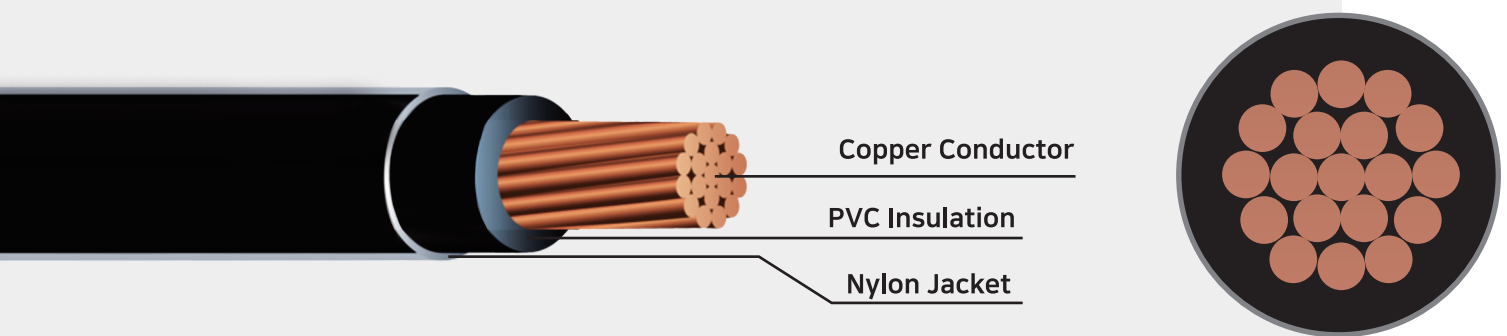
- UL 83 Thermoplastic-Insulated Wires and Cables
- ASTM B801
- Sunlight Resistant
- Oil Resistant I & II
- Gasoline Resistant
- FT1 Rated
- VW-1 Rated
- CT Rated (for 1/0 AWG and larger)

Conductor Size	Conductor Diameter	Insulation Thickness	Jacket Thickness	Overall Diameter	NetWeight	Ampacity at 60C	Ampacity at 75C	Ampacity at 90C
AWG or kcmil	inches	inches	inches	inches	lbs/kft			
8 AWG	0.134	0.030	0.005	0.204	27	35	40	45
6	0.169	0.030	0.005	0.239	38	40	50	55
4	0.213	0.040	0.006	0.305	62	55	65	75
2	0.268	0.040	0.006	0.360	91	75	90	100
1	0.299	0.050	0.007	0.413	117	85	100	115
1/0	0.335	0.050	0.007	0.449	141	100	120	135
2/0	0.378	0.050	0.007	0.492	172	115	135	150
3/0	0.423	0.050	0.007	0.537	210	130	155	175
4/0	0.476	0.050	0.007	0.590	257	150	180	205
250 kcmil	0.520	0.060	0.008	0.656	311	170	205	230
300	0.571	0.060	0.008	0.707	365	190	230	260
350	0.614	0.060	0.008	0.750	418	210	250	280
400	0.657	0.060	0.008	0.793	471	225	270	305
500	0.736	0.060	0.008	0.872	576	260	310	350
600	0.816	0.070	0.009	0.974	700	285	340	385
700	0.877	0.070	0.009	1.035	804	315	375	425
750	0.909	0.070	0.009	1.067	856	320	385	435
900	0.999	0.070	0.009	1.157	1,013	355	425	480
1000	1.059	0.070	0.009	1.217	1,117	375	445	500

► All values are nominal and subject to correction.

Thermoplastic-Insulated Wires and Cables

Copper THHN/THWN-2



Description

Copper THHN/THWN-2 conductors are primarily employed in conduit and cable trays, upon approval, for service, feeder, and branch circuit applications within commercial or industrial settings, as outlined in the National Electric Code. THHN is applicable for dry environments solely, maintaining temperatures below 90 degrees Celsius, whereas THWN-2 is adaptable to wet or dry conditions, also up to 90 degrees Celsius.

Application

- Used in conduit or cable trays
- Feeder wiring
- Branch circuit wiring

Conductors

- Either solid or compressed soft drawn bare copper conductors with class B stranded as per ASTM B8.

Insulation

- Abrasion, heat, and moisture resistant Polyvinyl Chloride (PVC) insulation with Nylon jacket.

Standards

- UL 83 Thermoplastic-Insulated Wires and Cables
- ASTM B3 & B8
- Sunlight Resistant
- Oil Resistant I & II
- Gasoline Resistant
- FT1 Rated
- VW-1 Rated
- CT Rated (for 1/0 AWG and larger)

Conductor Size AWG or kcmil	No. of Strands	Insulation Thickness		Jacket Thickness		Overall Diameter		Net Weight lbs/kft	Ampacity at 90 C
		inches	mm	inches	mm	inches	mm		
14 AWG	Solid	0.015	0.38	0.004	0.10	0.110	2.79	16	25
12	Solid	0.015	0.38	0.004	0.10	0.130	3.30	24	30
10	Solid	0.020	0.51	0.004	0.10	0.160	4.06	38	40
8	19	0.030	0.76	0.004	0.10	0.230	5.84	66	55
6	19	0.030	0.76	0.005	0.13	0.250	6.35	98	75
4	19	0.040	1.02	0.006	0.15	0.330	8.38	155	95
3	19	0.040	1.02	0.006	0.15	0.360	9.14	190	115
2	19	0.040	1.02	0.006	0.15	0.390	9.91	235	130
1	19	0.050	1.27	0.007	0.18	0.450	11.43	300	145
1/0	19	0.050	1.27	0.007	0.18	0.500	12.70	370	170
2/0	19	0.050	1.27	0.007	0.18	0.540	13.72	460	195
3/0	19	0.050	1.27	0.007	0.18	0.600	15.24	570	225
4/0	19	0.050	1.27	0.007	0.18	0.660	16.76	710	260
250 kcmil	37	0.060	1.52	0.008	0.20	0.720	18.29	845	290
300	37	0.060	1.52	0.008	0.20	0.766	19.46	985	320
350	37	0.060	1.52	0.008	0.20	0.830	21.08	1,165	350
400	37	0.060	1.52	0.008	0.20	0.864	21.95	1,296	380
500	37	0.060	1.52	0.008	0.20	0.960	24.38	1,640	430
600	61	0.070	1.78	0.009	0.23	1.051	26.70	1,934	475
750	61	0.070	1.78	0.009	0.23	1.170	29.72	2,480	520
1000	61	0.070	1.78	0.009	0.23	1.320	33.53	3,300	615

► All values are nominal and subject to correction.