



## SPECIFICATIONS AND STANDARDS:

1. ASTM specifications, UL Standard 83, UL Standard 1063 (MTW), Federal Specification A-A-59544
2. Rated Voltage: 600 V
3. Number of cores : One core.

## APPLICATIONS:

1. **THHN/THWN** Type building wire is intended for general purpose applications as defined by the National Electrical Code (NEC).  
**THHN-THWN-2** type is permitted for new construction or rewiring for 60 volt applications. Applications requiring Type THHN or THWN.
  - a). THHN: It indicates a single or stranded conductor having flame-retardant and heat-resistant thermoplastic insulation with a jacket of extruded nylon or equivalent material. The wire is rated 90°C dry only.
  - b). THWN: It indicates a single or stranded conductor having flame-retardant, moisture and heat resistant thermoplastic insulation with a jacket of extruded nylon or equivalent material. The wire is rated 75°C wet or dry.
2. the conductor is appropriate for use in wet or dry locations at temperatures not to exceed 90°C or not to exceed 75°C in oil or coolants. Applications requiring Type MTW conductor is appropriate for use in dry locations at 90°C, or not to exceed 60°C in wet locations or where exposed to oils or coolants. Applications requiring Type AWM conductor is appropriate for use at temperatures to not exceed 105°C in dry locations.

## PROPERTY:

- 1) Nylon outer jacket for easy pulling. VW-1 rated 14 AWG - 8 AWG. All sizes are rated gasoline and oil-resistant II.
- 2) Jacket: Nylon jacket is provided to protect PVC insulation against abrasions and scratches while pulling through conduits. It is also resistant to oil , gasoline and chemicals.

## CONSTRUCTION:

Insulation: PVC (Poly Vinyl Chloride) with Secondary Nylon Jacket  
Conductor: Annealed solid or stranded copper wires (copper or CCA)  
Voltage Rating: 600 Volts.



Single Core, Strand Copper, PVC Insulated Nylon Jacket Electric Building Wire -- 600V

**Technical Parameter of THHN-THWN-TW-THW Nylon Jacket PVC Building Electric Wire:**

AWG/MCM	mm2	Conductor			Insulation						Sheath			Total Weight kg/km
		Single Wire		OD. mm	PVC						Nylon			
		No.	Dia. mm		thick		min mil	min mm	min mm	OD. mm	Thick mils mil	mm	OD. mm	
					mil	mm								
16	1.31	1	1.29	1.29	15	0.38	0.51	14	0.36	2.05	4	0.1	2.25	16.73
14	2.08	1	1.626	1.626	15	0.38	0.51	14	0.36	2.386	4	0.1	2.586	24.53
12	3.29	1	2.048	2.048	15	0.38	0.51	14	0.36	2.808	4	0.1	3.008	36.61
10	5.26	1	2.589	2.589	20	0.51	0.64	19	0.48	3.609	4	0.1	3.809	58
16	1.67	7	0.551	1.653	15	0.38	0.51	14	0.36	2.413	4	0.1	2.613	21.5
14	2.08	7	0.615	1.845	15	0.38	0.51	14	0.36	2.605	4	0.1	2.805	25.84
12	3.30	7	0.775	2.325	15	0.38	0.51	14	0.36	3.085	4	0.1	3.285	38.51
10	5.26	7	0.978	2.934	20	0.51	0.64	19	0.48	3.954	4	0.1	4.154	60.82
9	6.63	7	1.098	3.294	20	0.51	0.64	19	0.48	4.314	5	0.13	4.574	75.34
8	8.32	7	1.23	3.69	30	0.76	0.9	28	0.71	5.21	5	0.13	5.47	98.69
7	10.47	7	1.38	4.14	30	0.76	0.9	28	0.71	5.66	5	0.13	5.92	120.76
6	13.21	7	1.55	4.65	30	0.76	0.9	28	0.71	6.17	5	0.13	6.43	148.58
5	16.65	7	1.74	5.22	30	0.76	0.9	28	0.71	6.74	6	0.15	7.04	183.78
4	21.12	7	1.96	5.88	40	1.02	1.1	35	0.89	7.92	6	0.15	8.22	235.76
2	33.54	7	2.47	7.41	40	1.02	1.1	35	0.89	9.45	6	0.15	9.75	359.83
16	1.23	19	0.287	1.435	15	0.38	0.51	14	0.36	2.195	4	0.1	2.395	16.72
14	2.04	19	0.37	1.85	15	0.38	0.51	14	0.36	2.61	4	0.1	2.81	25.35
12	3.30	19	0.47	2.35	15	0.38	0.51	14	0.36	3.11	4	0.1	3.31	38.27
10	5.19	19	0.59	2.95	20	0.51	0.64	19	0.48	3.97	4	0.1	4.17	59.86
9	6.50	19	0.66	3.3	20	0.51	0.64	19	0.48	4.32	5	0.13	4.58	73.64
8	8.17	19	0.74	3.7	30	0.76	0.9	28	0.71	5.22	5	0.13	5.48	95.16
7	10.53	19	0.84	4.2	30	0.76	0.9	28	0.71	5.72	5	0.13	5.98	120.74
6	13.19	19	0.94	4.7	30	0.76	0.9	28	0.71	6.22	5	0.13	6.48	145.02
5	16.45	19	1.05	5.25	30	0.76	0.9	28	0.71	6.77	6	0.15	7.07	180.78
4	21.13	19	1.19	5.74	40	1.02	1.1	35	0.89	7.78	6	0.15	8.08	229.38
3	26.40	19	1.33	6.45	40	1.02	1.1	35	0.89	8.49	6	0.15	8.79	280.88
2	33.58	19	1.5	7.26	40	1.02	1.1	35	0.89	9.3	6	0.15	9.6	350.23
1	42.12	19	1.68	8.15	50	1.27	1.38	45	1.14	10.69	7	0.18	11.05	447.22
1/0	53.30	19	1.89	9.14	50	1.27	1.38	45	1.14	11.68	7	0.18	12.04	555.15
2/0	67.07	19	2.12	10.3	50	1.27	1.38	45	1.14	12.84	7	0.18	13.2	687.52
3/0	84.53	19	2.38	11.6	50	1.27	1.38	45	1.14	14.14	7	0.18	14.5	854.27
4/0	107.18	19	2.68	13	50	1.27	1.38	45	1.14	15.54	7	0.18	15.9	1068.65



THHN-THWN-TW-THW, Nylon Jacket PVC Building Electric Wire

**Single Core, Strand Copper, PVC Insulated Nylon Jacket Electric Building Wire -- 600V**

250	125.72	37	2.08	14.2	60	1.52	1.67	55	1.4	17.24	8	0.2	17.64	1272.29
300	151.06	37	2.28	15.5	60	1.52	1.67	55	1.4	18.54	8	0.2	18.94	1512.81
350	177.29	37	2.47	16.8	60	1.52	1.67	55	1.4	19.84	8	0.2	20.24	1761.4
400	202.53	37	2.64	17.9	60	1.52	1.67	55	1.4	20.94	8	0.2	21.34	1999.42
500	252.89	37	2.95	19.7	60	1.52	1.67	55	1.4	22.74	8	0.2	23.14	2470.99
600	304.24	61	2.52	22	70	1.78	1.94	65	1.65	25.56	9	0.23	26.02	2998.91
650	328.87	61	2.62	22.9	70	1.78	1.94	65	1.65	26.46	9	0.23	26.92	3231.59
750	378.30	61	2.81	24.6	70	1.78	1.94	65	1.65	28.16	9	0.23	28.62	3697.59
1000	506.04	61	3.25	28.4	70	1.78	1.94	65	1.65	31.96	9	0.23	32.42	4896.32

**TW-THW**

**TW THW Type Nylon Jacket Electric wire.**

**Voltage : 600V**

**Application : Type TW and THW may be used for general purpose wiring for power and lighting, for insulation in air, conduit, duct or other recognized raceways, in wet or dry locations.**

Maximum Conductor Temperature :

Type	oil	wet	dry
TW	60°C	60°C	60°C
THW	75°C	75°C	75°C
MTW*	60°C	60°C	90°C

\* 1AWG AND LARGER ONLY

AWG/MCM	mm2	Conductor	Conductor			Insulation					Total Weight
		Type	Single Wire		OD.	PVC					kg/km
			No.	Dia.		Thick miles	mm	Thick	min	OD.	
18	0.82	solid	1	1.02	1.02	30	0.76	0.89	0.7	2.54	14.82
16	1.31	solid	1	1.29	1.29	30	0.76	0.89	0.7	2.81	20.27
14	2.09	solid	1	1.63	1.63	30	0.76	0.89	0.7	3.15	28.6
12	3.33	solid	1	2.06	2.06	30	0.76	0.89	0.7	3.58	41.48
10	5.27	solid	1	2.59	2.59	30	0.76	0.89	0.7	4.11	60.93
8	8.35	solid	1	3.26	3.26	45	1.14	1.22	1	5.54	98.99
6	13.33	solid	1	4.12	4.12	60	1.52	1.67	1.4	7.16	162.23
4	21.16	solid	1	5.19	5.19	60	1.52	1.67	1.4	8.23	240.34
18	0.82	B	7	0.386	1.158	30	0.76	0.89	0.7	2.678	15.65
16	1.31	B	7	0.488	1.464	30	0.76	0.89	0.7	2.984	21.43
14	2.08	B	7	0.615	1.845	30	0.76	0.89	0.7	3.365	30.1
12	3.30	B	7	0.775	2.325	30	0.76	0.89	0.7	3.845	43.38
10	5.26	B	7	0.978	2.934	30	0.76	0.89	0.7	4.454	64.02



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8	8.32	B	7	1.23	3.69	45	1.14	1.22	1	5.97	103.92
6	13.21	B	7	1.55	4.65	60	1.52	1.67	1.4	7.69	169.62
4	21.12	B	7	1.96	5.88	60	1.52	1.67	1.4	8.92	252.44
2	33.54	B	7	2.47	7.41	60	1.52	1.67	1.4	10.45	379.53
1	42.62	B	19	1.69	8.18	80	2.03	2.11	1.8	12.24	480.75
1/0	53.30	B	19	1.89	9.19	80	2.03	2.11	1.8	13.25	586.71
2/0	67.70	B	19	2.13	10.34	80	2.03	2.11	1.8	14.4	727.52
3/0	85.24	B	19	2.39	11.61	80	2.03	2.11	1.8	15.67	897.84
4/0	107.18	B	19	2.68	13	80	1.52	1.67	1.4	16.44	1097.15
250	126.94	B	37	2.09	14.2	95	2.41	2.56	2.2	19.02	1340.08
300	152.39	B	37	2.29	15.54	95	2.41	2.56	2.2	20.36	1586.07
350	177.29	B	37	2.47	16.79	95	2.41	2.56	2.2	21.61	1825.98
400	202.53	B	37	2.64	17.96	95	2.41	2.56	2.2	22.78	2068.12
500	252.89	B	37	2.95	20.04	95	2.41	2.56	2.2	24.86	2548.31
600	304.24	B	61	2.52	22	110	2.79	2.89	2.5	27.58	3084.92
750	380.99	B	61	2.82	24.64	110	2.79	2.89	2.5	30.22	3816.9
1000	506.04	B	61	3.25	28.4	110	2.79	2.89	2.5	33.98	5002.6