

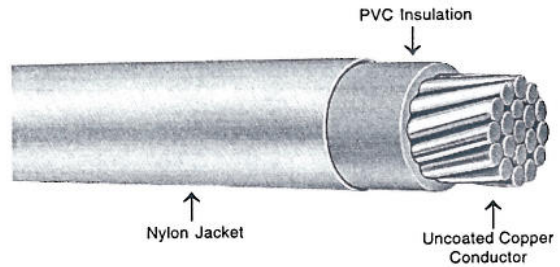
ROME THWN or THHN PVC Insulation, Nylon Jacket, 600 Volts

APPLICATION: General purpose wiring in accordance with the National Electrical Code, maximum conductor temperature of 90°C in dry locations and 75°C in wet locations, 600 volts, for installation in conduit or other recognized raceway. Also used for wiring of machine tools (stranded), appliances, and control circuits not exceeding 600 volts.

STANDARDS:

1. Listed by UL as Type THHN or THWN per Standard 83, and as Type MTW per Standard 1063 (stranded items).
2. Listed by UL as Gasoline and Oil Resistant II.
3. Listed by UL as Sunlight Resistant (1/0 AWG and larger, black only).
4. 1/0 AWG and larger pass UL and IEEE-383 ribbon burner flame test and are listed For CT Use.
5. Listed by UL as 105°C Appliance Wiring Material, 60°C where exposed to oil (stranded items only).
6. C(UL) listed as Type T90 Nylon or TWN75, FT1.
7. Conforms to Federal Specification J-C-30B.

CONSTRUCTION: Annealed uncoated copper conductor, PVC insulation, nylon jacket, surface printed.



Size AWG or kcmil	No. of Strands	Thickness in Mils		Nominal Diam. Inches	NEC Ampacity*		Approx. Wt. lb./1000 Ft.		Standard Package		STOCK ITEMS ⁽¹⁾														
		PVC Insulation	Nylon Jacket		75°C THWN	90°C THHN	Net	Shipping	Length	Put-up	1	2	3	4	5	6	7	8	9	10	11	12			
Solid (THWN or THHN)																									
14	Solid	15	4	.105	20 ^t	25 ^t	16	17	500' spls.	4 per ctn.	S	S	S	S	S	S	S	S	S	S	S	S	S		
								17	2500'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
12	Solid	15	4	.122	25 ^t	30 ^t	24	25	500' spls.	4 per ctn.	S	S	S	S	S	S	S	S	S	S	S	S	S		
								26	2500'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
10	Solid	20	4	.153	35 ^t	40 ^t	38	39	500' spls.	2 per ctn.	S	S	S	S	S	S	S	S	S	S	S	S	S		
								40	2500'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
Stranded (MTW or THWN or THHN)																									
14	19	15	4	.112	20 ^t	25 ^t	16	18	500' spls.	4 per ctn.	S	S	S	S	S	S	S	S	S	S	S	S	S		
								17	2500'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
12	19	15	4	.130	25 ^t	30 ^t	24	25	500' spls.	4 per ctn.	S	S	S	S	S	S	S	S	S	S	S	S	S		
								26	2500'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
10	19	20	4	.164	35 ^t	40 ^t	38	40	500' spls.	2 per ctn.	S	S	S	S	S	S	S	S	S	S	S	S	S		
								40	2500'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
8	19	30	5	.220	50	55	64	71	500'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
									1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
6	19	30	5	.256	65	75	98	99	500'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
									1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
4	19	40	6	.325	85	95	155	168	500'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
									1000'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
									NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
3	19	40	6	.353	100	110	190	204	500', 1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
2	19	40	6	.386	115	130	236	254	500', 1000'	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
									NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
1	19	50	7	.443	130	150	300	319	1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
1/0	19	50	7	.484	150	170	372	395	1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
2/0	19	50	7	.529	175	195	462	485	1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
3/0	19	50	7	.579	200	225	575	600	1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
4/0	19	50	7	.635	230	260	716	745	1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
250	37	60	8	.703	255	290	846	905	1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
300	37	60	8	.756	285	320	1005	1060	NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
350	37	60	8	.806	310	350	1165	1225	1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
400	37	60	8	.851	335	380	1325	1380	NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
500	37	60	8	.934	380	430	1640	1725	1000', NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
600	61	70	9	1.03	420	475	1995	2090	NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
750	61	70	9	1.14	475	535	2480	2580	NS	NR reel	S	S	S	S	S	S	S	S	S	S	S	S	S		
1000	61	70	9	1.32	545	615	3300				S	S	S	S	S	S	S	S	S	S	S	S	S		

*Ampacity in accordance with NEC for not more than three conductors in raceway. As THHN: 90°C conductor temperature and 30°C ambient in dry locations. As THWN: 75°C conductor temperature and 30°C ambient in wet or dry locations.

^t The over current protection shall not exceed 15 amperes for 14 AWG, 20 AWG amperes for 12 AWG and 30 amperes for 10 AWG copper.

⁽¹⁾ Color Code: 1 black, 2 white, 3 red, 4 blue, 5 green, 6 yellow, 7 orange, 8 brown, 9 purple, 10 pink, 11 gray, 12 tan.

Specification

ROME THWN or THHN

PVC - Nylon, 600 Volts

1. SCOPE

- 1.1 This specification describes single conductor Rome THWN or THHN, a general purpose building wire insulated with polyvinyl chloride (PVC) and covered with a tough protective sheath of nylon intended for lighting and power circuits at 600 Volts or less, in residential, commercial and industrial buildings. The wire may be operated at 90°C maximum continuous temperature in dry locations and 75°C in wet locations and is listed by Underwriters Laboratories for use in accordance with Article 310 of the National Electrical Code. The wire shall also be C(UL) listed as Types T90 Nylon or TWN75, FT1 indicating suitability for use in accordance with the Canadian Code.

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 83 for Thermoplastic Insulated Wires.
 - 2.1.2 Underwriters Laboratories Standard 1063 for Machine-Tool Wires and Cables (Stranded items only).
 - 2.1.3 Underwriters Laboratories Standard 758 for 105°C Appliance Wiring Materials (Stranded items only).
 - 2.1.4 CSA Standard C22.2 No. 75 and Electrical Bulletin No. 1451 for Type T90 Nylon or TWN75.
 - 2.1.5 Federal Specification J-C-30B.

3. CONDUCTORS

- 3.1 Conductors shall be solid, Class B or Class C stranded, annealed uncoated copper per UL Standards 83 or 1063.

4. INSULATION

- 4.1 Each conductor shall be insulated with PVC and sheathed with nylon complying with requirements of UL Standard 83 for Types THHN or THWN, UL Standard 1063 for Type MTW and CSA C22.2 No. 75 for T90 Nylon. In addition, Types THWN or THHN shall comply with the optional Gasoline and Oil Resistant II rating of UL Standard 83. The insulation on stranded sizes shall also comply with UL requirements for 105°C Appliance Wiring Material.
- 4.2 The average thickness of PVC insulation, for a given conductor size, shall be as specified in UL Standard 83 for Types THWN or THHN. The minimum thickness at any point, of the PVC insulation, shall be not less than 90% of the specified average thickness. The minimum thickness at any point of the nylon sheath, shall be as specified in UL Standard 83 for Types THWN or THHN. The PVC insulation shall be applied tightly to the conductor and shall be free-stripping.

5. IDENTIFICATION

- 5.1 The wire shall be identified by surface marking indicating manufacturer's identification, conductor size and metal, voltage rating, UL Symbol, type designations and optional ratings. The wire shall also be identified as C(UL) Type T90 Nylon or TWN75, FT1.

6. TESTS

- 6.1 Wire shall be tested in accordance with the requirements of UL Standard 83 for Types THWN or THHN wire and for the optional Gasoline and Oil Resistant II listings; as Type MTW to UL Standard 1063 (stranded items); as AWM to UL Standard 758 (stranded items); and as C(UL) Type T90 Nylon or TWN75.

7. LABELS

- 7.1 The wire shall bear the Underwriters Laboratories labels for Types THWN or THHN (solid conductors) and Type MTW (stranded conductors) and the C(UL) label for Types T90 Nylon or TWN75, FT1.