

# TYPE NM-B COPPER CONDUCTOR

## ENGINEERING SPECIFICATIONS:



### Standards:

Underwriters Laboratories Standards UL-83, UL-719  
Federal Specification A-A-59544  
ASTM-B3 and B8  
ARRA 2009; Section 1605 "Buy American" Compliant

### CONSTRUCTION:

#### Conductors:

Solid 14-10 AWG soft, uncoated copper, per ASTM-B3  
Stranded 8 AWG conductor and larger uncoated, copper ASTM-B8

#### Insulation:

Color-coded Polyvinyl Chloride (PVC) compound meeting the required thickness of Type THHN with a heat-stabilized Nylon jacket rated for 90°C in dry locations.

#### Grounding Conductor:

Soft, uncoated copper per ASTM-B3 and/or ASTM-B8

#### Applications:

Type NM-B (Non-metallic sheathed cable) has a broad range of usage as defined in Article 334 of the National Electrical Code (NEC). Type NM-B cable is commonly used for residential fixtures, switches, and loads rated for at least 90°C. Type NM-B ampacity limitation shall be in accordance with the 60°C conductor temperature rating, as specified in the National Electrical Code. Type NM-B is rated for 600 volts for both exposed and concealed work in normally dry locations. Type NM-B may be installed or fished in air voids and joints and in masonry block or tile walls where such walls are not exposed to, nor subject to, excessive moisture or dampness.

#### Assembly:

2-conductor construction has the insulated conductors laid parallel with a bare copper ground wire wrapped in paper and laid parallel between the insulated conductors. The entire assembly is wrapped with a paper separator before applying the PVC outer jacket. 3 and 4 conductor constructions may have the insulated conductors laid parallel or twisted together before applying the PVC outer jacket.

#### Jacket:

A 30-mil, color-coded, PVC jacket is applied over the completed assembly as follows:

14 AWG White | 12 AWG Yellow | 10 AWG Orange | 8 AWG Black | 6 AWG Black

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Size (AWG) and Number of Conductors	Number of Strands	Ground Wire Size (AWG)	Insulation Thickness (in)		Allowable Ampacity (Amps)*	Outside Diameter (in)	Approximate Net Weight (lbs/1000 ft)	Standard Packaging (ft)
			PVC	Nylon				
<b>With Ground</b>								
14/2G	Solid	14	.015	.004	15	.170 x .390	56	25' 50' 100' 250' 500' 1000' RL/EZ, 5000' reels
12/2G	Solid	12	.015	.004	20	.160 x .450	82	25' 50' 100' 250' 500' 1000' RL/EZ, 4000' reels
10/2G	Solid	10	.020	.004	30	.210 x .493	123	25' 50' 100' 250' 500' 1000' 5000' reels
8/2G	7	10	.030	.005	40	.290 x .580	185	125' 250' EZ, 500' 1000' 2500' reels
6/2G	7	10	.030	.005	55	.330 x .695	256	125' 250' EZ, 500' 1000' 2500' reels
14/3G	Solid	14	.015	.004	15	.170 x .450	74	25' 50' 100' 250' 500' 1000' 5000' reels
12/3G	Solid	12	.015	.004	20	.345	107	25' 50' 100' 250' 500' 1000' 5000' reels
10/3G	Solid	10	.020	.004	30	.430	165	25' 50' 100' 250' 500' 1000' 2500' 5000' reels
8/3G	7	10	.030	.005	40	.555	251	50' 125' 250' EZ, 500' 1000' 2500' reels
6/3G	7	10	.030	.005	55	.612	352	50' 125' 250' EZ, 500' 1000' 2500' reels
4/3G	7	8	.040	.006	70	.820	565	125' 250' EZ, 500' 1000' reels
2/3G	7	8	.040	.006	95	.945	841	125' 250' EZ, 500' 1000' reels
**14/4G & 14/2-2G	Solid	14	.015	.004	12	.345	90	250' 1000' 5000' reels
**12/4G & 12/2-2G	Solid	12	.015	.004	16	.385	132	250' 1000' 5000' reels
**10/4G	Solid	10	.020	.004	30	.540	205	250' 1000' 5000' reels

\*Allowable ampacity shown above is per the National Electrical Code. The above data is approximate and subject to normal manufacturing tolerances.

\*\*Color-Coding for four-color conductor NM-B Black, White, Red and Blue. | Color-Code for 2-2 conductor is Black, Red, White and White with a Red Stripe.

PRINT LEGEND: ENCORE WIRE CORPORATION (SIZE) WITH GROUND TYPE NM-B 600 VOLTS (UL) DATE/TIME/OPER/QC