

# TYPE NM-B - COPPER CONDUCTOR - 600V

## ENGINEERING SPECIFICATIONS

### Standards

Underwriters Laboratories Standards UL-83, UL-719, UL-1581, UL-2556; Federal Specification A-A-59544; ASTM-B3 and B8; New York State DOS-16120-87-1222-1048; NEMA RV 2-2011; NFPA 70 (NEC®) Article 334; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-123775



## 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 or THWN-2 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

### Jacket

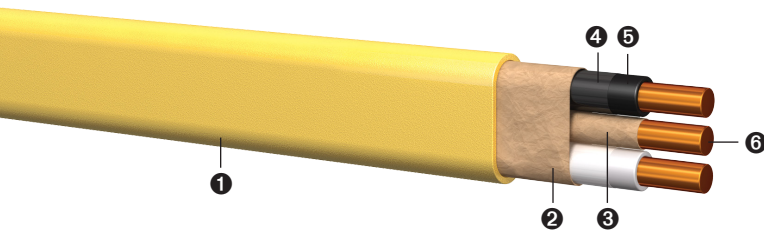
A 30-mil, color-coded, flame retardant and moisture resistant PVC jacket is applied over the completed assembly as follows: 14 AWG White | 12 AWG Yellow | 10 AWG Orange | 8 AWG Black | 6 AWG Black

## 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 wiring of luminaries, devices and appliances. Type NM-B ampacity limitation shall be in accordance with the 60°C conductor temperature rating, as specified in the NEC. Type NM-B is rated 600-volt 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 fire-retardant 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 SuperSlick Elite color-coded PVC jacket.



- 1 SuperSlick Elite<sup>1</sup> Color-Coded PVC Jacket
- 2 Paper Sheath
- 3 Treated Paper Separator
- 4 Nylon Jacket
- 5 PVC Insulation
- 6 Annealed Solid or Stranded Copper Conductor

Size (AWG or KCMIL)	No. of Strands	Ground Wire Size (AWG)	Insulation Thickness (in)		Allowable Ampacity (Amps) <sup>2</sup>	Outside Diameter (in)	Approximate Net Weight (lbs/1000 ft)	Standard Packaging (ft)
			PVC	Nylon				
14/2 G <sup>1</sup>	Solid	14	0.015	0.004	15	0.166 x 0.333	57	25', 50', 100', 250', 500', 1000' RL/EZ, 5000' Reels
12/2 G <sup>1</sup>	Solid	12	0.015	0.004	20	0.182 x 0.382	82	25' 50' 100' 250' 500' 1000' RL/EZ, 4000' Reels
10/2 G <sup>1</sup>	Solid	10	0.020	0.004	30	0.213 x 0.464	123	25' 50' 100' 250' 500' 1000' 5000' Reels
8/2 G <sup>1</sup>	7	10	0.030	0.005	40	0.290 x 0.580	185	125' 250' EZ, 500' 1000' 2500' Reels
6/2 G <sup>1</sup>	7	10	0.030	0.005	55	0.330 x 0.695	256	125' 250' EZ, 500' 1000' 2500' Reels
14/3 G <sup>1</sup>	Solid	14	0.015	0.005	15	0.166 x 0.438	74	25' 50' 100' 250' 500' 1000' 5000' Reels
12/3 G <sup>1</sup>	Solid	12	0.015	0.004	20	0.345	107	25' 50' 100' 250' 500' 1000' 5000' Reels
10/3 G <sup>1</sup>	Solid	10	0.020	0.004	30	0.430	165	25' 50' 100' 250' 500' 1000' 2500' 5000' Reels
8/3 G	7	10	0.030	0.005	40	0.555	251	50' 125' 250' EZ, 500' 1000' 2500' Reels
6/3 G	7	10	0.030	0.005	55	0.612	352	50' 125' 250' EZ, 500' 1000' 2500' Reels
4/3 G	7	8	0.040	0.006	70	0.820	565	125' 250' EZ, 500' 1000' Reels
2/3 G	7	8	0.040	0.006	95	0.945	841	125' 250' EZ, 500' 1000' Reels
14/4 G & 14/2-2 G <sup>3</sup>	Solid	14	0.015	0.004	15	0.345	90	250' 1000' 5000' Reels
12/4 G & 12/2-2 G <sup>3</sup>	Solid	12	0.015	0.004	20	0.385	132	250' 1000' 5000' Reels
10/4 G <sup>3</sup>	Solid	10	0.020	0.004	30	0.540	205	250' 1000' 5000' Reels

<sup>1</sup> SuperSlick Elite manufactured under Patent No. 8,658,576

<sup>2</sup> Ampacity of conductors are based on NFPA 70 (NEC) Table 310.16. See 110.14(C), 240.4(D) and 310.15(B) and (C) for other limitations where applicable.

Note: Additional ampacity limitations, adjustments or corrections may apply per 310.15 and 240.4 of the NEC.

<sup>3</sup> Color-Coding for four-color conductor NM-B Black, White, Red and Blue. 1 Color-Code for 2-2 conductor is Black, Red, White and White with a Red Stripe.

The above data is approximate and subject to normal manufacturing tolerances.

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