

## 3/C CU 2.4kV 90 Mil's NLEPR PVC MV-105

Type MV-105 Three Conductor Copper, 90 Mil's No Lead Ethylene Propylene Rubber (NL-EPR) Polyvinyl Chloride (PVC) Jacket



Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 90 Mil's No Lead Ethylene Propylene Rubber (NL-EPR)
4. **Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
5. **Filler:** Wax paper filler
6. **Binder:** Poly glass tape
7. **Overall Jacket:** Polyvinyl Chloride (PVC)

### APPLICATIONS AND FEATURES:

Southwire's 2.4KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 105°C for normal operation, 140°C for emergency overload, and 250°C for short circuit conditions. Rated at -35°C for cold bend. For uses in Class I and II, Division 2 hazardous locations per NEC Article 501 and 502. Rated for 1000 lbs./FT maximum sidewall pressure.

### SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 1072 Medium-Voltage Power Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-96-659 (NEMA WC 71) 2001-5000 V Nonshielded Cables

### SAMPLE PRINT LEGEND:

SOUTHWIRE POWER CABLE MASTER-DESIGN {UL} 3/C XX AWG CU 90 MILS NL-EPR 2400V NONSHIELDED GW 1 X X AWG MV-105 FOR CT USE - SUN. RES. - FOR DIRECT BURIAL - WET & DRY LOC. {YYYY} {NESC} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET



**Table 1 – Weights and Measurements**

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Ground	Jacket Thickness <sup>1</sup>	Approx. OD	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG/ Kcmil	inch	inch	No. x AWG	mil	inch	lb/1000ft	lb	inch
600495	4/0	0.512	0.779	1 x 3	95	1.901	3094	5078	13.3

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

<sup>1</sup> Comply with ICEA S-93-639 Appendix C for jacket thickness determination

**Table 2 – Electrical and Engineering Data**

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Shield Short Circuit Current 6 Cycles	Allowable Ampacity In Duct 90/105°C <sup>†</sup>	Allowable Ampacity In Air 90/105°C <sup>‡</sup>
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
4/0	0.051	0.064	0.031	48114	265/285	285/320

<sup>†</sup> Ampacities are based on TABLE 310.60(C)(79) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

<sup>‡</sup> Ampacities are based on TABLE 310.60(C)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

