

# 1/C CU 2.4kV EPR Thermoset LSZH-TS MV-90. Silicone Free

Type MV-90 Single Conductor Copper, Ethylene Propylene Rubber (EPR) Thermoset SOLONON® Low Smoke Zero Halogen (LSZH-TS) Jacket. Silicone Free



Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
- Conductor Shield:** Semi-conducting cross-linked copolymer
- Insulation:** Ethylene Propylene Rubber (EPR)
- Overall Jacket:** Thermoset SOLONON® Low Smoke Zero Halogen (LSZH-TS)

## APPLICATIONS AND FEATURES:

Southwire's 2.4KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90° C for normal operation, 130°C for emergency overload, and 250°C for short circuit conditions. Rated at -25°C for cold bend. Rated for 1000 lbs./FT maximum sidewall pressure. Silicone Free.

## SPECIFICATIONS:

- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 1072 Medium-Voltage Power Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- ICEA S-96-659 (NEMA WC 71) 2001-5000 V Nonshielded Cables
- CT USE Sizes 1/0 AWG and Larger
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

## SAMPLE PRINT LEGEND:

{SQFTG\_DUAL} SOUTHWIRE{R} POWER CABLE MASTER-DESIGN {UL} XXX AWG CU XXX MILS EPR/SOLONON XL JKT 2400V NONSHIELDED MV-90 WET/DRY ST1 OIL RES II FOR CT USE MAXIMUM 2400 VOLTS



**Table 1 – Weights and Measurements**

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Jacket Thickness <sup>1</sup>	Approx. OD	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size*
	AWG/Kcmil	inch	inch	mil	mil	inch	lb/1000ft	lb	inch	inch
TBA	6	0.178	0.465	125	80	0.625	241	209	5.0	2
958546	2	0.283	0.563	125	80	0.723	411	531	5.8	2
958553	1	0.322	0.602	125	80	0.762	477	670	6.1	2.5
611095	1/0	0.362	0.642	125	80	0.802	560	845	6.4	2.5
953570	2/0	0.405	0.685	125	80	0.871	685	1065	7.0	2.5
611111	3/0	0.456	0.736	125	95	0.926	819	1342	7.4	3
611129	4/0	0.512	0.792	125	95	0.982	979	1693	7.9	3
611137	250	0.558	0.878	140	110	1.098	1181	2000	8.8	3.5
611152	350	0.661	0.981	140	110	1.201	1541	2800	9.6	3.5
611178	500	0.789	1.109	140	110	1.329	2067	4000	10.6	4
611194	750	0.968	1.318	155	125	1.568	3007	6000	12.5	5
611202	1000	1.117	1.467	155	125	1.717	3858	8000	13.7	5

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

\* Conduit size based on 3 phase 40% fill-factor without ground

\* #2 awg non "LS" rated

**Table 2 – Electrical and Engineering Data**

Cond. Size	DC Resistance @ 25° C	AC Resistance @ 90° C	Inductive Reactance @ 60Hz	Allowable Ampacity In Duct 90° C <sup>†</sup>	Allowable Ampacity In Air 90° C <sup>‡</sup>
AWG/Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
6	0.403	0.495	0.027	85	110
2	0.162	0.203	0.043	145	190
1	0.129	0.161	0.042	170	225
1/0	0.102	0.128	0.040	195	260
2/0	0.081	0.101	0.039	220	300
3/0	0.064	0.081	0.038	250	345
4/0	0.051	0.064	0.037	290	400
250	0.043	0.054	0.037	320	445
350	0.031	0.039	0.035	385	550
500	0.022	0.028	0.034	470	695
750	0.014	0.020	0.033	585	900
1000	0.011	0.016	0.032	670	1075

<sup>†</sup> Ampacities are based on TABLE 310.60(C)(77) Detail 1. of the 2020 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

<sup>‡</sup> Ampacities are based on TABLE 310.60(C)(69) of the 2020 National Electrical Code (40°C Ambient Air Temperature)

