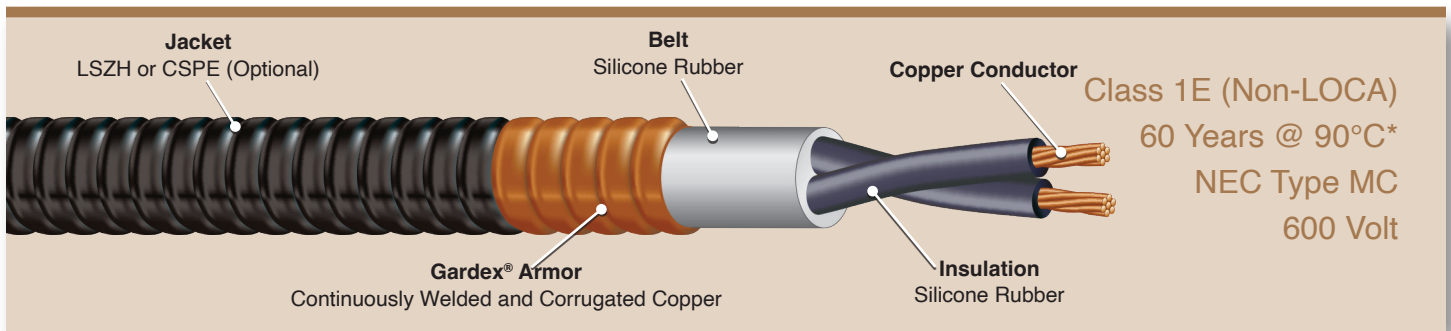


# Firezone<sup>®</sup> MC1

## 1 Hour Fire Resistance

# FIREZONE<sup>®</sup>



### Applications

- NFPA 805
- MSO — Multiple Spurious Operation
- Appendix R

### Features

- Meets the requirements of UL 2196 Fire Resistive Cable Standard as a 1 Hour “Electrical Circuit Integrity System”
- Nuclear Class 1E Non-LOCA
- 60 year life at 90°C continuous conductor temperature
- Low smoke, halogen free design available
- Extremely flame retardant
- Easy termination using conventional tools
- Printed number coding allows for easy circuit identification
- Available in long lengths
- Armor is impact and crush resistant
- Install in tray with other cables or clamp on wall
- Manufactured under Appendix B program

### Performance Standards

- 1-hour fire resistance in accordance with UL 2196, following the ASTM E119 Time Temperature Curve
- 10 CFR 50 Appendix B quality assurance program
- Class 1E (non-LOCA) qualified to IEEE 383-1974 and IEEE 323-1974
- Passes FT-4/IEEE 1202 70,000 BTU/hr vertical tray flame test
- Passes IEEE 383-1974 70,000 BTU/hr vertical tray flame test as modified by NRC Reg. Guide RG 1.131
- For normal operation in wet and dry locations
- Armored with copper sheath that exceeds the NEC requirements for equipment grounding conductor
- Passes IEEE 1210 for Polywater<sup>®</sup> Lubricants CLR, Dyna Blue<sup>™</sup>, LZ, and G

### Construction

**Conductor:** Annealed bare copper, Class B stranded

**Insulation:** Nuclear grade thermoset, low smoke zero halogen silicone rubber

**Circuit ID:** Printed numbers per ICEA Method 4

**Belt:** Nuclear grade thermoset, low smoke zero halogen silicone rubber

**Armor:** Continuously welded and corrugated copper

**Outer Jacket (Optional):** Nuclear grade thermoset low smoke, zero halogen polyolefin or halogenated CSPE

### Scope

Firezone<sup>®</sup> MC1 is a low smoke zero halogen cable designed specifically for the nuclear industry. Firezone<sup>®</sup> MC1 is the cable solution that helps maintain the critical electrical link between essential equipment during a 1 hour ASTM E119 fire event. It can be used for power or control circuits.

\* Rated 90°C for normal operation, 130°C for emergency overload conditions, and 250°C for short circuit conditions.

Conductor Size	Max DCR @ 20°C (Ohms/1,000 ft)	Insulation Thickness/OD (mil/Inch)	Number of Conductors	Min Bend Radius Permanent (Inch)		Unjacketed Cable Diameter (Inch)	Unjacketed Cable Weight (lbs/1000 ft)	Jacketed Cable Diameter (Inch)
				Insulated Conductor	Overall Cable			
14 AWG	2.6842	60/0.194	2	1.00	5.50	0.780	395	0.886
			3		5.75	0.820	390	0.926
			4		6.25	0.886	450	0.992
			5		6.75	0.940	505	1.046
			7		7.50	1.040	590	1.146
			9		8.75	1.235	805	1.341
			12		8.75	1.235	820	1.341
12 AWG	1.6959	60/0.213	2	1.00	5.75	0.820	400	0.926
			3		6.25	0.886	455	0.992
			4		6.75	0.940	515	1.046
			5		7.25	1.004	580	1.110
			7		7.75	1.075	680	1.181
			9		9.50	1.350	1010	1.456
			12		9.50	1.350	1030	1.456
10 AWG	1.0612	60/0.236	2	1.00	6.25	0.890	460	0.996
			3		6.75	0.940	530	1.046
			4		7.25	1.004	605	1.110
			5		7.50	1.075	685	1.181
			7		8.25	1.155	820	1.261
			9		10.00	1.410	1205	1.516
			12		10.00	1.410	1250	1.516
8 AWG	0.6659	70/0.287	3	1.25	7.50	1.043	670	1.149
			4		8.25	1.155	785	1.261
6 AWG	0.4193	70/0.324	3	1.50	8.25	1.155	830	1.261
			4		8.75	1.215	970	1.321
4 AWG	0.2632	70/0.371	3	1.50	8.75	1.235	1050	1.341
			4		9.50	1.350	1265	1.456
2 AWG	0.1654	70/0.430	3	1.75	9.75	1.380	1430	1.486
			4		10.50	1.500	1700	1.606
1 AWG	0.1321	90/0.509	3	2.25	11.25	1.585	1745	1.712
			4		12.25	1.729	2130	1.856
1/0 AWG	0.1040	90/0.548	3	2.25	11.75	1.670	2035	1.797
			4		12.75	1.820	2500	1.947
2/0 AWG	0.0827	90/0.593	3	2.50	12.75	1.795	2400	1.922
			4		13.75	1.950	2955	2.077
3/0 AWG	0.0655	90/0.643	3	2.75	13.50	1.915	2845	2.042
			4		15.00	2.123	3560	2.250
4/0 AWG	0.0520	90/0.699	3	3.00	14.50	2.038	3410	2.165
			4		16.00	2.258	4260	2.416
250 kcmil	0.0440	105/0.776	3	3.25	16.00	2.258	4015	2.416
			4		17.25	2.460	5005	2.618
350 kcmil	0.0314	105/0.879	3	3.75	17.50	2.480	5225	2.638
			4		19.00	2.710	6555	2.868
500 kcmil	0.0221	105/1.008	3	4.25	19.75	2.820	7020	2.978
			4		22.00	3.128	8945	3.306