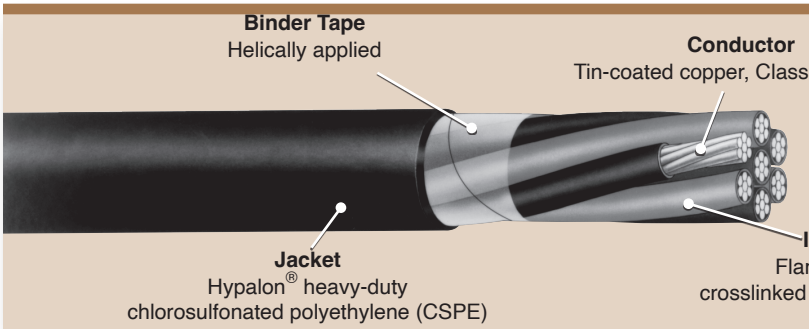
Firewall® III
Control Cable
K-1 Color Code XLPE/HD-CSPE (Hypalon®)

FIREWALL®



90°C*, 600 Volt
Class 1E Nuclear

Spec. RSS-3-021

Features

- Thermoset insulation and jacket for enhanced thermal stability
- Specially formulated insulation for superior long term water resistance
- Extremely flame retardant
- Nuclear qualified with a minimum 40-year thermal life expectancy at 90°C
- Radiation resistant (up to 200 megarads)
- Full traceability
- Excellent mechanical properties
- Tin-coated copper conductors for improved terminations and corrosion resistance
- All singles pass a wet dielectric (tank) test prior to cabling to verify electrical integrity
- All jackets have printed sequential footage markers for improved inventory control
- Easy strippability for installation ease

Scope

Firewall® III (K-1) control cable is a totally thermoset construction specifically designed for applications in utility generating plants and substations. It is intended for use in harsh and demanding environments, including Class 1E nuclear applications. It may be installed in trays, ducts, conduits or in direct burial applications to perform a variety of low voltage control and related functions.

Performance Standards

- Insulation in accordance with ICEA S-66-524
- Jackets in accordance with ICEA S-19-81 for Hypalon® heavy-duty chlorosulfonated polyethylene (CSPE)
- Class 1E qualified in accordance with IEEE 383-1974 and IEEE 323-1974 (RSCC Reports QR-5804 or QR-5805)
- Cable passes IEEE 383-1974 70,000 BTU/hr vertical tray flame test as modified by NRC Reg. Guide 1.131
- Cable passes ICEA T-29-520 210,000 BTU/hr vertical tray flame test
- Single conductors pass the vertical flame tests specified in IEEE 383-1974 para. 2.5.6 (ICEA S-19-81 Section 6.19.6) and UL VW-1
- Quality assurance program in accordance with 10 CFR 50 Appendix B
- Upon specific request, can be UL listed as Type TC for NEC tray installations (UL 1277)

Construction

- **Conductor:** Annealed, tin-coated copper, Class "B" strand (ASTM B8 & B33)
- **Insulation:** Proprietary heat, moisture and radiation resistant flame retardant crosslinked polyethylene
- **Circuit Identification:** Colored insulation per ICEA Method 1, Table K-1
- **Fillers:** As applicable
- **Binder Tape:** Helically applied
- **Jacket:** Hypalon® black, heavy-duty chlorosulfonated polyethylene (HD-CSPE)

* Rated 90°C for normal operation in wet and dry locations, 130°C for emergency overload conditions, and 250°C for short circuit conditions.

Marmon Industrial Energy & Infrastructure

Made in the USA

Marmon Electrical
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Firewall® III
Control Cable
K-1 Color Code XLPE/HD-CSPE (Hypalon®)

FIREWALL®

14 AWG, 7 Strand

Product Code	Number of Conductors	Insulation Thickness (Mils)	Insulated Conductor Diameter (Inch)	Jacket Thickness (Mils)	Nominal Overall Diameter (Inch)	Approximate Net Weight (Lbs/1000 Ft)	Bend Radius		Maximum Straight Run Pull Tension (Lbs By Conductors)	Nominal Heat of Combustion (BTUs/Ft)
							Permanent Training (Inch)	During Installation (Inch)		
C53-0020	2	30	0.14	45	0.37	90	1.50	3.00	65	773
C53-0030	3	30	0.14	45	0.39	110	1.75	3.25	96	840
C53-0040	4	30	0.14	45	0.42	130	1.75	3.50	131	936
C53-0050	5	30	0.14	45	0.46	160	2.00	3.75	163	1140
C53-0070	7	30	0.14	45	0.50	196	2.00	4.00	229	1276
C53-0090	9	30	0.14	60	0.62	272	2.50	5.00	295	1879
C53-0120	12	30	0.14	60	0.69	337	3.00	5.75	393	2195
C53-0190	19	30	0.14	60	0.80	491	3.25	6.50	608	2967
C53-3499	25	30	0.14	80	0.97	655	4.00	8.00	800	3996
C53-3501	37	30	0.14	80	1.11	940	5.75	11.25	1184	5572

12 AWG, 7 Strand

Product Code	Number of Conductors	Insulation Thickness (Mils)	Insulated Conductor Diameter (Inch)	Jacket Thickness (Mils)	Nominal Overall Diameter (Inch)	Approximate Net Weight (Lbs/1000 Ft)	Bend Radius		Maximum Straight Run Pull Tension (Lbs By Conductors)	Nominal Heat of Combustion (BTUs/Ft)
							Permanent Training (Inch)	During Installation (Inch)		
C52-0020	2	30	0.16	45	0.41	117	1.75	3.50	104	916
C52-0030	3	30	0.16	45	0.43	144	1.75	3.50	156	996
C52-0040	4	30	0.16	45	0.47	175	2.00	4.00	208	1116
C52-0050	5	30	0.16	45	0.51	215	2.25	4.25	260	1356
C52-0070	7	30	0.16	60	0.59	288	2.50	4.75	364	1745
C52-0090	9	30	0.16	60	0.68	370	2.75	5.50	468	2235
C52-0120	12	30	0.16	60	0.76	462	3.25	6.25	625	2603
C52-1190	19	30	0.16	80	0.93	723	3.75	7.50	988	4020
C52-3637	25	30	0.16	80	1.08	895	5.50	11.00	1300	4608
C52-3406	37	30	0.16	80	1.24	1307	6.25	12.50	1924	6600

10 AWG, 7 Strand

Product Code	Number of Conductors	Insulation Thickness (Mils)	Insulated Conductor Diameter (Inch)	Jacket Thickness (Mils)	Nominal Overall Diameter (Inch)	Approximate Net Weight (Lbs/1000 Ft)	Bend Radius		Maximum Straight Run Pull Tension (Lbs By Conductors)	Nominal Heat of Combustion (BTUs/Ft)
							Permanent Training (Inch)	During Installation (Inch)		
C51-0020	2	30	0.18	45	0.45	166	2.00	3.75	166	1217
C51-0030	3	30	0.18	45	0.48	201	2.00	4.00	249	1251
C51-0040	4	30	0.18	45	0.52	260	2.25	4.25	332	1570
C51-0050	5	30	0.18	60	0.60	330	2.50	5.00	415	2018
C51-0070	7	30	0.18	60	0.66	399	2.75	5.50	581	2069
C51-0090	9	30	0.18	60	0.76	514	3.25	6.25	747	2664
C51-0120	12	30	0.18	80	0.90	687	3.75	7.25	996	3570
C51-1190	19	30	0.18	80	1.05	980	5.25	10.50	1577	4344
C51-3570	25	30	0.18	80	1.22	1270	6.25	12.25	2075	5477
C51-3571	37	30	0.18	80	1.40	1810	7.00	14.00	3071	7260

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