



Okonite® FMR-N® (Nuclear Grade EPR)

600 Volt Power and Control Cable

Single Copper Conductor/90°C Rating
For Central Station Applications



A Coated Copper
Conductor
B Okonite FMR-N Insulation

Insulation

Okonite FMR-N is Okonite's trade name for its heat, moisture, flame and chemically resistant, mechanically rugged nuclear plant qualified ethylene-propylene insulation compound. Its physical properties and flame retardancy permit its use without a jacket on the single conductors.

The properties of Okonite FMR-N insulation substantially enhance the well known features of ethylene propylene rubber insulations.

Nuclear qualified Okonite FMR-N cables meet IEEE Standard - 383 LOCA and flame test criteria.

Applications

Okonite FMR-N Power and Control Cables are recommended for use in either power generating plants and in substations; designed especially for critical circuits where continuity of service is of prime importance. This premium quality control cable is recommended for wet or dry, ac or dc service at conductor temperatures to 90°C. They may be installed in conduits, ducts, cable troughs, trays, messenger supported, or directly buried in the earth.

Specifications

Conductors: Copper per ASTM B-3, Class B stranded per ASTM B-8 and coated copper per ASTM B-33.

Insulation: Okonite FMR-N meets or exceeds the electrical and physical requirements of ICEA S-73-532 & S-95-658.

Product Features

- Qualified as Class 1E cable
- Sizes 6 AWG and larger pass the IEEE 383 and 1202 flame test requirements.
- All sizes pass the ICEA S-95-658 vertical wire flame test.
- Quality Assurance traceability.
- Extreme heat resistance 90°C continuous rating; 130°C emergency overload rating; 250°C short circuit rating.
- Rated 90°C wet or dry.
- Exceptional resistance to deformation at high temperatures.
- Stable electrical properties
- Low SIC and power factor.
- Low moisture absorption.
- Mechanically rugged.
- Resistant to weather.
- Smaller diameter.
- More flexible, easier to install or terminate than XLPE insulation.

Okonite FMR-N® (Nuclear Grade EPR)

600V Power and Control

Copper Conductor/90°C Wet or Dry For Central Station Applications

Product Data Section 3: Sheet 9

Catalog Number	Conductor Size AWG/kcmil	Number of Strands	Insulation Thickness - mils	Insulation Thickness - mm	Approx. O.D. - Inches	Approx. O.D. - mm	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	ICEA Ampacity (1)
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ICEA S-95-658, Table 3-4 Column A Insulation Thicknesses

112-17-1071	14	7	45	1.14	0.17	4.83	26	31	22
112-17-1101	12	7	45	1.14	0.19	4.83	33	38	28
112-17-1131	10	7	45	1.14	0.21	5.33	47	52	37
112-17-1191	8	7	60	1.52	0.27	6.86	75	80	49
112-17-1221	6	7	60	1.52	0.31	7.87	109	120	65
112-17-1251	4	7	60	1.52	0.35	8.89	163	174	85
112-17-1311	2	7	60	1.52	0.41	10.41	247	270	112
112-17-1331	1	19	80	2.03	0.49	12.45	321	344	131
112-17-1351	1/0	19	80	2.03	0.53	13.46	395	427	151
112-17-1371	2/0	19	80	2.03	0.58	14.73	487	519	173
112-17-1391	3/0	19	80	2.03	0.63	16.00	601	633	207
112-17-1411	4/0	19	80	2.03	0.68	17.27	745	784	238
112-17-1431	250	37	95	2.41	0.76	19.56	891	930	266
112-17-1471	350	37	95	2.41	0.86	22.10	1217	1272	324
112-17-1531	500	37	95	2.41	0.99	25.40	1702	1766	398
112-17-1591	750	61	110	2.79	1.20	31.00	2536	2636	517
112-17-1651	1000	61	110	2.79	1.35	34.80	3335	3451	595

ICEA S-95-658, Table 3-4 Column B Insulation Thicknesses

112-16-1071	14	7	30	0.76	0.14	3.56	18	23	22
112-16-1101	12	7	30	0.76	0.15	3.81	26	31	28
112-16-1131	10	7	30	0.76	0.18	4.57	39	44	37
112-16-1191	8	7	45	1.14	0.24	6.10	63	68	49
112-16-1221	6	7	45	1.14	0.27	6.89	96	101	65
112-16-1251	4	7	45	1.14	0.32	8.13	147	158	85
112-16-1311	2	7	45	1.14	0.37	9.40	223	246	112
112-16-1331	1	19	55	1.40	0.42	10.70	282	305	131
112-16-1351	1/0	19	55	1.40	0.46	11.70	352	384	151
112-16-1371	2/0	19	55	1.40	0.50	12.70	439	471	173
112-16-1391	3/0	19	55	1.40	0.54	13.70	548	580	207
112-16-1411	4/0	19	55	1.40	0.60	15.20	685	717	238
112-16-1431	250	37	65	1.65	0.67	17.00	820	859	266
112-16-1471	350	37	65	1.65	0.77	19.60	1134	1189	324
112-16-1531	500	37	65	1.65	0.89	22.6	1604	1668	398
112-16-1591	750	61	80	2.03	1.14	29.0	2404	2493	517
112-16-1651	1000	61	80	2.03	1.29	32.8	3191	3307	595

Visit Okonite's web site, www.okonite.com, for the most up to date dimensions.

To order a color other than black, change the last digit of the catalog number as follows:			
White	2	Orange	5
Red	3	Blue	6
Green	4	Yellow	7
Example: To order #14 - Red, the catalog number would be 112-16-1073.			

(1) Ampacities:

Based on three (3) single conductors in conduit in air, 90°C rated conductor & 40°C ambient per IEEE Std. 835-1994, pg 29 (no wind, no sun).

For cables installed in cable tray, see ANSI/ICEA P-54-440 (NEMA WC 51-2003)