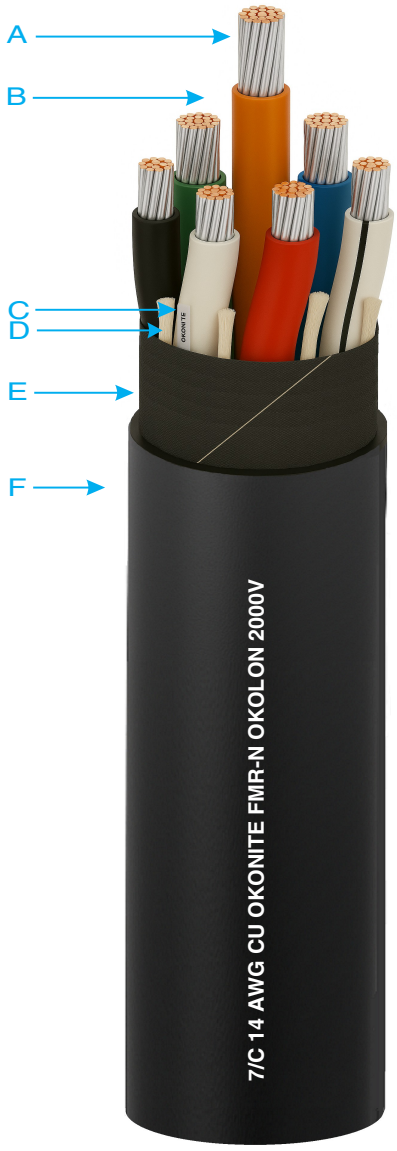
Okonite® FMR-N® Okolon® TS-CPE

1000/2000 Volt Control Cable

Multiple Copper Conductors/90°C Rating
For use in Central and Nuclear Generating Stations



A Stranded Tin Coated Copper Conductors
B Okonite FMR-N Insulation
C Marker Strip
D Flame and Moisture Resistant Fillers (as needed)
E Fiberglass Binder Tape
F Okolon TS-CPE Jacket

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 excellent physical properties and inherent flame retardancy permit its use without an overall jacket on single conductors.

The properties of Okonite FMR-N insulation further enhance the well-known performance characteristics of conventional ethylene propylene rubber insulations.

Nuclear-qualified Okonite FMR-N cables meet the environmental qualification requirements of IEEE 323 and the LOCA and flame test criteria of IEEE 383.

Overall Jacket

The overall Okolon TS-CPE jacket is a thermoset chlorinated polyethylene compound. This combination construction assures circuit security because of its high mechanical strength and excellent resistance to moisture, ozone, oil and most chemicals.

Applications

Okonite FMR-N Power and Control Cables are recommended for use in power generating plants and substations, particularly in critical circuits where continuity of service is essential. These premium-quality cables are suitable for wet or dry locations and for either AC or DC service at conductor temperatures up to 90°C. They may be installed in conduits, ducts, cable troughs, trays, messenger-supported, or directly buried in the earth.

Specifications

Conductors: Tin Coated Copper per ASTM B-33, Class B stranded per ASTM B-8.

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

Color Coding: #8 AWG and larger use ICEA S-73-532 NEMA/WC57 Method 4 with printed numbers. Sizes smaller than #8 AWG use ICEA Method 1, Table E1, colored insulation using base colors and tracers as shown on last page.

Assembly: Conductors cabled using flame and moisture resistant fillers.

Overall Jacket: The Okolon TS-CPE compound meets or exceeds the requirements of ICEA S-73-532

Product Features

- Qualified as Class 1E cable.
- Flame retardant - meets or exceeds the flame test requirements of IEEE 383 (Type CL) and IEEE 1202 (FT4).
- Quality Assurance traceability.
- 90°C rated cable, factory-assembled for indoor or outdoor installation in cable trays, raceways, direct burial, or messenger-supported configurations.
- Mechanically rugged.
- Flexible, easy to install and terminate.
- Color coded conductors.
- Resistant to water, oil and most chemicals.
- Thermally stable at elevated temperatures.
- High insulation resistance, even at elevated temperatures.
- Small diameter, lightweight.

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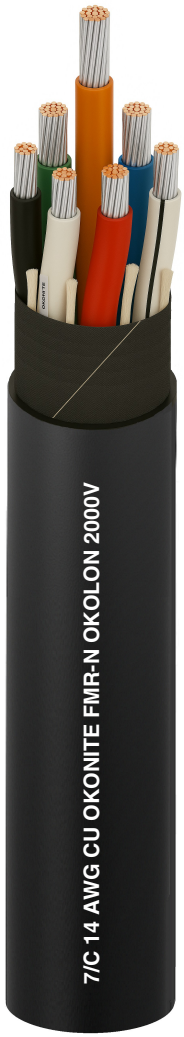
Okonite FMR-N Insulation — 1000/2000V

Catalog Number	Conductor Size (AWG)	Number of Conductors	Insulation Thickness-mils	Jacket Thickness - mils	Jacket Thickness - mm	Approx O.D. - Inches	Approx O.D. - mm	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')	90°C Wet or Dry Ampacity (1)
1000V										
202-18-2053	16 (7x) 1.31 mm²	3	45 1.14 mm	45	1.14	0.45	11.4	124	137	16
202-18-2054		4		45	1.14	0.49	12.4	157	170	14
202-18-2055		5		45	1.14	0.54	13.7	182	198	13
202-18-2057		7		60	1.52	0.61	15.5	240	258	10
202-18-2059		9		60	1.52	0.71	18.0	324	353	9
202-18-2062		12		60	1.52	0.83	21.1	410	487	7
202-18-2069		19		80	2.03	0.97	24.6	560	611	6
202-18-2087		37		80	2.03	1.29	32.8	994	1084	4
2000V										
202-18-2153	14 (7x) 2.08 mm²	3	45 1.14 mm	45	1.14	0.48	12.2	157	175	21
202-18-2154		4		45	1.14	0.53	13.5	187	205	19
202-18-2155		5		60	1.52	0.61	15.5	250	271	17
202-18-2157		7		60	1.52	0.66	16.8	284	316	14
202-18-2159		9		60	1.52	0.76	19.3	386	425	12
202-18-2162		12		60	1.52	0.86	21.8	479	534	10
202-18-2169		19		80	2.03	1.04	26.4	710	774	8
202-18-2187		37		80	2.03	1.38	35.1	1562	1678	6
202-18-2302	12 (7x) 3.33 mm²	2	45 1.14 mm	45	1.14	0.49	12.4	151	169	32
202-18-2303		3		45	1.14	0.52	13.2	190	208	27
202-18-2304		4		60	1.52	0.60	15.2	250	271	24
202-18-2305		5		60	1.52	0.66	16.8	303	335	22
202-18-2307		7		60	1.52	0.71	18.0	363	402	19
202-18-2309		9		60	1.52	0.88	21.1	493	548	16
202-18-2312		12		80	2.03	0.98	24.9	668	732	14
202-18-2319		19		80	2.03	1.13	28.7	917	997	11
202-18-2337		37		80	2.03	1.51	38.4	1644	1787	8
202-18-2452	10 (7x) 5.26 mm²	2	45 1.14 mm	45	1.14	0.54	13.7	198	216	42
202-18-2453		3		60	1.52	0.61	15.5	281	305	35
202-18-2454		4		60	1.52	0.66	16.8	342	374	32
202-18-2455		5		60	1.52	0.72	18.3	408	447	28
202-18-2457		7		60	1.52	0.79	20.1	501	540	23
202-18-2459		9		80	2.03	0.96	24.4	701	765	20
202-18-2462		12		80	2.03	1.08	27.4	892	959	17
202-18-2652	9 (19x) 6.63 mm²	2	45 1.14 mm	60	1.52	0.60	15.2	256	280	49
202-18-2653		3		60	1.52	0.64	16.3	315	347	40
202-18-2654		4		60	1.52	0.70	17.8	386	425	36
202-18-2655		5		60	1.52	0.76	19.3	462	501	32
202-18-2657		7		60	1.52	0.83	21.1	574	629	27
202-18-2659		9		80	2.03	1.01	25.7	835	899	23
202-18-2662		12		80	2.03	1.13	28.7	1024	1104	20



Okonite's web site, www.okonite.com contains the most up to date information.

(1) Ampacities are based on one cable in conduit in air, 90°C rated conductor & 40°C ambient.

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

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Conductor Color Coding Sequence — Sizes 16 - 9 AWG

Conductor Number	Background or Base Color	Tracer Color
1	Black	
2	White	
3	Red	
4	Green	
5	Orange	
6	Blue	
7	White	Black
8	Red	Black
9	Green	Black
10	Orange	Black
11	Blue	Black
12	Black	White
13	Red	White
14	Green	White
15	Blue	White
16	Black	Red
17	White	Red
18	Orange	Red
19	Blue	Red
20	Red	Green
21	Orange	Green

Color Coding per ICEA Method 1, E-1

Alternate color code shall be used for greater than 21 conductor count.

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