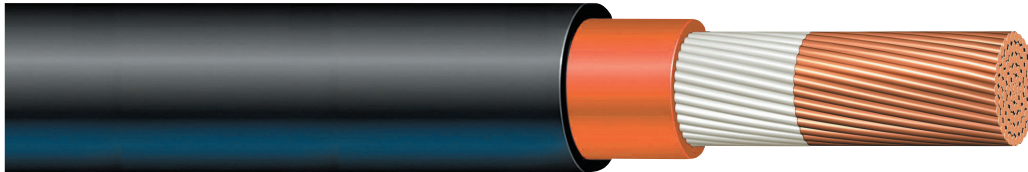


BOSTRAIL[®] Traction Power Cable

single conductor / EPR insulated / XLPO jacket / 4/0 AWG to 2000 KCMIL / 2000 volt



Applications

These are single conductor 2000 volt power cables where low-smoke non-halogen cables are required. They consist of a ethylene propylene rubber insulated conductor jacketed with a tough low smoke zero halogen (LSZH) crosslinked polyolefin (XLPO) jacket. They are highly heat, oil and moisture-resistant, extremely tough yet flexible, and can sustain 90°C wet or dry operating temperatures. A shielded version is available as well.

Ratings

- Rated 90°C Wet or Dry Traction Power Cable
- UL 1581 Vertical Tray (70,000 BTU)
- UL RHW-2

Construction

CONDUCTOR: The conductor is class “B” stranded compressed concentric round in accordance with ASTM B8. The wires are uncoated soft, annealed copper of 100% conductivity in accordance with ASTM B3. The conductor resistance meets the requirements of ICEA S-95-658 (NEMA WC70).

INSULATION: Low smoke non-halogen ethylene propylene rubber (EPR) rated for 90°C wet or dry, complying with ICEA standards (see chart on back). The insulation fits tightly to the conductor but is ‘clean-stripping.’ An opaque polyester tape or other suitable separator is used over the conductor.

JACKET: Flame retardant, low smoke non-halogen and oil resistant crosslinked polyolefin (XLPO) jacket (see chart on back). The jacket is bonded to the EPR insulation.

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Part Number	Conductor Size	Stranding	Average Insulation Thickness in (mm)	Average Jacket Thickness in (mm)	Minimum Bend Radius in (cm)	Ampacity* 90°C	Cable O.D in (mm)	Approximate Cable Weight Lbs/Mft (Kg/Km)
TR0000	4/0 AWG	19/W	.110 (2.8)	.065 (1.7)	3.5 (89)	405	0.880 (22.3)	900 (1341)
TR0500	500 KCMIL	37/W	.110 (2.8)	.080 (2.0)	5.0 (127)	700	1.190 (30.2)	1930 (2875)
TR0750	750 KCMIL	61/W	.125 (3.2)	.080 (2.0)	6.0 (152)	885	1.400 (35.6)	2870 (4276)
TR1000	1000 KCMIL	61/W	.125 (3.2)	.095 (2.4)	6.5 (165)	1055	1.580 (40.1)	3710 (5528)
TR1500	1500 KCMIL	91/W	.125 (3.2)	.095 (2.4)	7.5 (191)	1325	1.830 (46.5)	5380 (8016)
TR2000	2000 KCMIL	127/W	.125 (3.2)	.110 (2.8)	8.5 (216)	1725	2.080 (52.8)	7100 (10579)

*Ampacity based on ambient air temperature of 30°C in free air

*Representative spec - Draka manufactures to all transit and railroad specifications accordingly.

The data herein is approximate and subject to normal manufacturing tolerances.

Information is subject to change without notice. Consult factory for a variety of alternate constructions for specific applications.

Requirements for EPR Insulation

Characteristics	Test Method	Guaranteed Values
Tensile Strength, PSI	ASTM D470	1200 min
Elongation, %	ASTM D470	150 min
Air Oven Aging (7 days @ 121°C) ASTM D573		
Tensile Strength, %		75 min
Elongation, %		75 min
Air Oven Aging (7 days @ 150°C) ASTM D573		
Tensile Strength, %		75 min
Elongation, %		75 min
Gravimetric Water ASTM D470		
Absorption, 7 days @ 70°C, mg/in ²		
Water Absorption (EM-60) ASTM D470		
Electrical Method @ 75°C		
Specific Conductive Capacitance (SIC) 3.5 max		
Capacitance Increase (1 - 14 days immersion, %)		2.0 max
Capacitance Increase (7 - 14 days immersion, %)		1.0 max
Stability Factor (after 14 days immersion, %)		1.0 max
Insulation Resistance Constant (K), Megohms-1000 ft	ICEA 95-658	20,000 min

Requirements for Insulation and Jacket

Characteristics	Test Method	Guaranteed Values
Halogen Content, %	MIL-C-24643	0.2 max
Ozone Resistance (150 ppm @ 25°C) ASTM D470 pass		
Smoke Index	NES 711	25 max
Smoke Density (100 mil slab) ASTM E662		
Flaming Mode Ds 4 Min		50
Flaming Mode Dm Within 4 Min		250
Non-Flaming Mode Ds 4 Min		50
Non-Flaming Mode Dm Within 4 Min		250
Toxicity Index	NES 711	1.5 max
Acid Gas, % (hydrogen ions)	MIL-C-24643	1.0 max

Requirements for XLPO Jacket

Characteristics	Test Method	Guaranteed Values
Tensile Strength, PSI	ASTM D470	1700 min
Elongation, %	ASTM D470	150 min
Air Oven Aging (7 days @ 121°C) ASTM D573		
Tensile Strength, %		90 min
Elongation, %		75 min
Air Oven Aging (7 days @ 150°C) ASTM D573		
Tensile Strength, %		90 min
Elongation, %		75 min
Oil Immersion Aging (18 hrs @ 121°C) ASTM D471		
Tensile Strength, %		60 min
Elongation, %		60 min
Gravimetric Water ASTM D470		
Absorption, 7 days @ 70°C, mg/in ²		20 max
Durometer, Shore A	ASTM D2240	90 +5
Tear Strength, lbs/in	ASTM D624	35 min
Oxygen Index, %	ASTM D2863	35 min

Requirements for Completed Cable

Characteristics	Test Method	Guaranteed Values
Cold Bend @ -40°C, 24 hrs (8x OD)		pass
IEEE 383 Flame Test		pass

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