



PowrServ®

PowrNet®

600 Volt Network Cable

>Duct or Direct Buried 600 Volt Cables Installed Where Reliability and Maximum Performance are Required



>General Cable's PowrNet® cable was developed for use in congested urban networks (particularly in duct systems) where high reliability, easy-to-install low smoke and fume cables are needed.

>This unique cable design provides the advantages of low tracking, low smoke and reduced gas evolution in the event of a fire. These installed performance features are complemented by excellent abrasion and tear resistance properties coupled with a low coefficient of friction, which allows easy pulling into existing duct systems.

>PowrNet® was designed specifically for duct or direct buried 600 volt cables installed in either wet or dry locations where reliability and maximum performance are required.

>PowrNet® network cables are manufactured to meet the following specifications:

ICEA S-95-658
ICEA Guide T-33-655
UL 1685





Composite Insulation/Jacket

Property	Required	Typical	Units	Test Method
Tensile & Elongation (Initial)				
Initial Tensile Strength (Min)	1200 (8.27)	1350 (9.31)	Psi (MPa)	ICEA T-27-581
Initial Elongation (Min)	150	225	%	ICEA T-27-581
Air Oven Aging (168 Hours @ 121°C)				
Retained Tensile Strength (Min)	75	85	%	ICEA T-27-581
Retained Elongation (Min)	75	85	%	ICEA T-27-581
Hot Creep (150°C)				
Elongation (Max)	50	12	%	ICEA T-28-562
Hot Set (Max)	5	0	%	ICEA T-28-562

Other Test Data

Property	Required	Typical	Units	Test Method
Crush Test				
Crush (Min)	1000 (6.89)	>2500* (>17.24)	lbf (MPa)	ICEA S-81-570
Flame Smoke Testing				
Vertical Tray Flame (Max Char Height)	8	2.8	ft	UL 1685 LS
Smoke Emission (Peak Smoke)	0.25	0.02**	m ² /s	
Smoke Emission (Total Smoke)	95	1.7**	m ²	

* Based on #1/0 AWG insulated cable

** Based on a 500 kcmil CU insulated cable tested to UL 1685 flame test reference: "UL 70,000 BTU vertical-tray flame test"

Insulation

Property	Required	Typical	Units	Test Method
Tensile & Elongation (Initial)				
Initial Tensile Strength (Min)	N/A (N/A)	1700 (11.72)	Psi (MPa)	ICEA T-27-581
Initial Elongation (Min)	N/A	300	%	
Air Oven Aging (168 Hours @ 158°C)				
Retained Tensile Strength (Min)	N/A	100	%	ICEA T-27-581
Retained Elongation (Min)	N/A	90	%	
Oil Immersion (24 Hours @ 121°C)				
Retained Tensile Strength (Min)	N/A	60	%	ICEA T-27-581
Retained Elongation (Min)	N/A	60	%	
Heat Deformation (1 Hour @ 121°C, 2000 g)				
Percent Deformation	N/A	<1	%	ICEA T-27-581

Jacket Property	Required	Typical	Units	Test Method
Tensile & Elongation (Initial)				
Initial Tensile Strength (Min)	N/A (N/A)	1650 (11.38)	Psi (MPa)	ICEA T-27-581
Initial Elongation	N/A	200	%	ICEA T-27-581
Air Oven Aging (168 Hours @ 136°C)				
Retained Tensile Strength	N/A	100	%	ICEA T-27-581
Retained Elongation	N/A	85	%	ICEA T-27-581
Oil Immersion (18 Hours @ 121°C)				
Retained Tensile Strength	N/A	75	%	ICEA T-27-581
Retained Elongation	N/A	75	%	ICEA T-27-581
5% NaCl Immersion (24 Hours @ 23°C)				
Retained Tensile Strength	N/A	110	%	ICEA T-27-581 (As Applicable)
Heat Deformation (1 Hour @ 121°C, 2000 g)				
Percent Deformation	N/A	5	%	ICEA T-27-581
Dust and Fog Tracking				
Track Resistance (Min)	200	>265	Hours	ASTM D-2132
Smoke Generation				
Flaming Mode Ds4 (Max)	50	10		ASTM E-662
Flaming Mode Dm (Max)	250	190		
Non-Flaming Mode Ds4 (Max)	50	20		
Non-Flaming Mode Dm (Max)	350	230		



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 Form No. UTY-0011-R0410