

TurboFlex® Copper Core, Duraelectric™ D Insulation and Fabric Overbraid, 2000-4500 VAC • 961-044 Imperial

ABRASION-RESISTANT • HIGH-TEMP • COPPER CORE

FEATURES

- Fabric overbraid provides abrasion and temperature protection. Choose the appropriate braid with the selection guide table at right.
- Voltage rating is dependent on insulation wall thickness, select per application requirements.

How to Order TurboFlex®	
Sample Part Number	961-044 -1 -C -G -2 -D -0
Basic No.	TurboFlex with Duraelectric D Insulation and fabric overbraid
Wall Thickness	-1 = .125" (4500 VAC) -2 = .093" (3500 VAC) -3 = .062" (3000 VAC) -4 = .032" (2000 VAC) -5 = .016"
Conductor Material	-T = Tin/Copper (-65° - 150°C) -S = Silver/Copper (-65° - 200°C) -N = Nickel/Copper (-65° - 200°C)
Wire Size (See Table I)	See Table I: (Conductor size availability depends on Insulation thickness) A, B, C, D, E, F, G, H, I, J, K, L, T, R, S
Duraelectric D Insulation Color	See Table II
Braid Material	See Braid Material and Color Selection Guide
Braid Color	See Braid Material and Color Selection Guide

Table I: Conductor Size Code (availability depends on Insulation thickness)

Conductor size (AWG)	Insulation Thickness in. (mm)						
	.125	.093	.062	.032	.016		
20	N/A	N/A	N/A	T	T		
16				R	R		
14				S	S		
12				A	A	A	
10				B	B	B	
8				C	C	C	C
6				D	D	D	
4				E	E	E	
2				F	F	F	
1/0				G	G	G	
2/0	H	H	H	N/A			
3/0	I	I	I				
4/0	J	J	J	N/A			
250 MCM	K	K					
450 MCM	L	L	N/A				

Table IV: Approximate Outer Diameter

Conductor size (AWG)	Insulation Thickness in. (mm)						
	.125	.093	.062	.032	.016		
20	N/A	N/A	N/A	.16	.12		
16				.18	.16		
14				.20	.17		
12				.28	.22	.19	
10				.31	.25	.22	
8				.40	.34	.28	.25
6				.44	.38	.32	
4				.51	.45	.39	
2				.58	.52	.46	
1/0				.74	.67	.61	.55
2/0	.79	.72	.66				
3/0	.85	.79	.73	N/A			
4/0	.92	.85	.79	N/A			
250 MCM	.97	.90					
450 MCM	1.20	1.13	N/A				

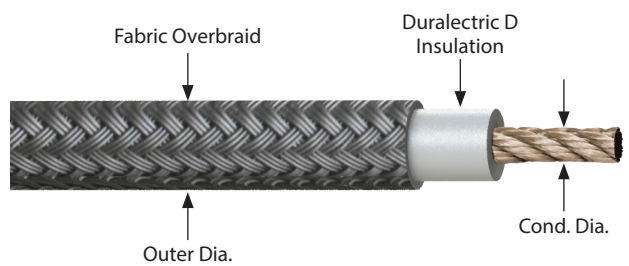
Table II: Duraelectric D Insulation Color

	Weatherproof, halogen free, flame resistant
0	Black
1	Brown
2	Red
3	Orange
4	Yellow
5	Kelly Green
6	Blue
7	Violet
8	Gray
9	White

Consult factory for other specific colors

Table III: Voltage Rating

Insulation Thickness	AC Voltage Rating, RMS
.125 (3.18)	4500
.093 (2.36)	3500
.062 (1.57)	3000
.032 (0.81)	2000
.016 (0.41)	1000



NOTES

1. Cable will be tagged with complete part number

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Braid Material and Color Selection Guide										
Principal Selection Criteria	General Duty / Abrasion Resistance					Economy		Temperature Tolerance	Fire Resistance	
Braid Code Material Construction	Z Monofilament FEP	P Monofilament PET, Type FR	H Monofilament Halar®	M Yarn, Nomex®	R Monofilament Ryton, Type R-7	D Yarn, Dacron®	Y Yarn, Nylon	K Monofilament PEEK	X Yarn, PTFE-Glass	V Yarn, Kevlar®
Color Code Options	C = Clear	B = Black W = White	B = Black W = White BW = Black w/ White Tracer WB = White w/ Black Tracer	B = Black R = Red OR = Orange GN = Green GY = Gray W = White TN = Desert Tan	N = Natural	B = Black	B = Black GY = Gray OD = Olive Drab	B = Black	BR = Brown N = Natural	B = Black N = Natural
Halogen-Free	NO		NO						NO	
Temperature Range	-55°C to +200°C	-55°C to +125°C	-65°C to +150°C	-55°C to +200°C	-65°C to +180°C	-62°C to +125°C	-20° to +170°	-65°C to +260°C	-204°C to +482°C	-73°C to +160°C
Tensile Strength (PSI) Yield	3300	50,000	7000	90,000	19,000	10,000	12,400	13,000	450,000	400,000
Elongation Percentage	50%	20%	15%	25%	40%	12%	90%	38%	5%	3.6%
Chemical Resistance	Excellent	Good	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Excellent	Excellent
Abrasion Resistance	Good	Good	Excellent	Good	Excellent	Fair	Excellent	Excellent	Excellent	Good
Weight / Duty (specific gravity)	Heavy (2.17)	Medium (1.38)	Medium (1.68)	Medium (1.58)	Light (1.25)	Medium (1.38)	Light (1.14)	Light (1.3)	Heavy (2.5)	Medium (1.44)
Flammability	Very Low	Flammable, Self-Extinguishing	Very Low	Will Not Melt	Very Low	Flammable	Flammable	Very Low	Will Not Burn	Will Not Melt

Table V: Service Temperature Matrix (min/max in °C) Service temperature dependent on conductor and braid material selected				
Braid Code	Braid Material (and temperature range)	Conductor Material (and temperature range)		
		Tin Copper (-65/+150)	Silver Copper (-65/+200)	Nickel Copper (-65/+260)
D	Dacron (-62/+125)	(-65/+125)	(-65/+125)	(-65/+125)
H	Halar (-65/+150)	(-65/+150)	(-65/+150)	(-65/+150)
Y	Nylon (-20/+170)	(-20/+150)	(-20/+170)	(-20/+170)
M	Nomex (-55/+200)	(-55/+150)	(-55/+200)	(-55/+200)
P	Polyester Type FR (-55/+125)	(-55/+125)	(-55/+125)	(-55/+125)
Z	FEP Teflon (-55/+200)	(-55/+150)	(-55/+200)	(-55/+200)
R	Ryton Type R-7 (-65/+180)	(-65/+150)	(-65/+180)	(-65/+180)
K	PEEK (-65/+260)	(-65/+150)	(-65/+200)	(-65/+260)
V	Kevlar (-73/+160)	(-65/+150)	(-65/+160)	(-65/+160)
X	PTFE-Glass (-204/+482)	(-65/+150)	(-65/+200)	(-65/+260)

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