

# Single Wires

## Fluoropolymer wire types

### ETFE: Z

Offering an excellent range of physical properties such as mechanical toughness, flex-life, fire performance and chemical resistance. ETFE cores are ideal for general-purpose use and are used extensively in both military and industrial applications and are manufactured to a wide variety of standards.

Conductor	TPC	
Insulation	ETFE	
Sizes	36 AWG to 240mm <sup>2</sup>	
Voltage	UZT	160 V
	ZL	600 V
	ZN	600 V
Temp.	-65°C / +155°C	



### FEP: K

Thin wall insulation material intended for use up to 200°C. FEP has good electrical properties and excellent fire performance. It is the most flexible of the fluoropolymer insulations and is ideal for use in long lengths. FEP is primarily used in data and coaxial cables, medical applications and control/signal cables for high temperatures.

Conductor	SPC	
Insulation	FEP	
Sizes	36 AWG to 95mm <sup>2</sup>	
Voltage	UKT	160 V
	KT	250 V
	K	600 V
	KK	1000 V
Temp.	-65°C / +200°C	



### PFA: A

Intended for applications up to 260°C. Sharing many of the properties of PTFE, the high temperature rating and low out-gassing properties of PFA allow it to be used particularly in industrial applications such as gas turbines and under vacuum conditions.

Conductor	SPC	
Insulation	PFA	
Sizes	32 AWG to 6 AWG	
Voltage	H-AT	250 V
	H-A	600 V
	H-AA	1000 V
Temp.	-65°C / +200°C	



### PTFE: E

Habia Cable's original insulation material, intended for use up to 260°C. PTFE has excellent mechanical properties, including solder resistance and offers unparalleled electrical performance. Typical applications for PTFE include gas ignition wires, gas turbines, vacuum applications and high temperature data cables.

Conductor	SPC or NPC	
Insulation	PTFE	
Sizes	36 AWG to 12 AWG	
Voltage	UT	160 V
	ET	250 V
	E	600 V
	EE	1000 V
Temp.	-65°C / +200°C or +260°C	



# Single Wires

Halogen Free, Flame Retardant (HFFR) wire types

## HFI 121 XL: XC

Habia Cable's general purpose product for larger sizes. Cores using HFI 121 XL insulation are reasonably flexible despite their size. They also have a much wider temperature rating than most HFFR cables with short term temperatures up to +150°C.

Conductor	TPC
Insulation	HFI 121 XL
Sizes	0.5mm <sup>2</sup> to 150mm <sup>2</sup>
Voltage	600 V
Temp.	-30°C / +122°C



## HFI 140 XL: DX

Developed from the Seaguard range of Def Stan 61-12 Part 18 cores. HFI 140 XL offers excellent low smoke zero halogen, flame retardant and radiation resistant properties. It is commonly used for control, signal and instrumentation applications.

Conductor	TPC
Insulation	HFI 140
Sizes	30 AWG to 10mm <sup>2</sup>
Voltage	600 V
Temp.	-30°C / +120°C



## HFI 147: RN

A general purpose material ideal for use in a wide variety of applications, particularly due to its thin-wall construction and its wide temperature range.

Conductor	TPC
Insulation	HFI 147
Sizes	30 AWG to 12 AWG
Voltage	600 V
Temp.	-30°C / +140°C



## HFI 150: B

Primarily used within the nuclear sector and as part of the Habiatron range thanks to its flame retardant, Low Smoke Zero Halogen (LSZH) and highly radiation tolerant properties. Commonly used for control, signal and instrumentation applications.

Conductor	TPC
Insulation	HFI 150
Sizes	30 AWG to 50mm <sup>2</sup>
Voltage	600 V
Temp.	-50°C / +135°C



# Single Wires

## Other wire types

### TPS 130: R

With very good flexibility and flex-life properties and a wide temperature range of -40°C up to 130°C, TPS 130 is rapidly becoming established as an ideal general-purpose material.

Conductor	TPC
Insulation	TPS 130
Sizes	26 AWG to 2.5mm <sup>2</sup>
Voltage	300 V
Temp.	-60°C / +90°C



### TWI 205: H

An ultra-thin-wall taped insulation and jacketing material. Intended for applications up to 200°C.

Conductor	SPC	
Insulation	TWI 205	
Sizes	32 AWG to 10 AWG	
Voltage	H-HT	250 V
	H-H	600 V
	H-HH	1000 V
Temp.	-65°C / +200°C	



### XLETFE: F

Designed according to the Def Stan 61-12 Part 33/001 specification for airframe wiring, Habia Cable's LSI 155 cores are available in both thin-wall and dual-wall types.

The Def Stan specifies wire sizes from 26 AWG up to 12 AWG (thin-wall) and 26 AWG up to 2/0 AWG (dual-wall), however smaller sizes can be manufactured on request. The Def Stan also requires sizes 24 AWG and smaller to be manufactured with high strength alloy conductors. These can be substituted for non-approved TPC or SPC on request.

Conductor	TPC or SPC	
Insulation	LSI 155	
Sizes	26 AWG to 2/0 AWG	
Voltage	600 V	
Temp.	-65°C / +135°C or +150°C	

