



**Nexans**  
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Plain Annealed Copper conductor (Flexible), X-HF-110 (XLPE) insulation, Low Fire Hazard HFS-110-TP sheath. 0.6/1 kV. Made to AS/NZS 5000.1

**STANDARDS**

Product AS/NZS 5000.1

Test IEC 60754-1

**APPLICATIONS**

ENVIROLEX® flexible single core cable is part of the Nexans Fire Safety Offer. As a Low Fire Hazard (LFH) range, ENVIROLEX® is PVC-free, made with flame retardant compound and reduces toxic smoke emissions in the event of fire, allowing time for safe evacuation.

ENVIROLEX® single core cable has multiple applications including switchboard wiring, pumps, power supplies, transformer LV switches, battery connections.

**BENEFITS**

- Flame Retardant, Non Hazardous, No Heavy Metals
- Low Smoke, Low Calorific Value
- Gross heat of combustion ISO:1716
- Halogen free, PVC Best Practice (As per Green Building Council requirements)
- Flexible: easy to handle and install
- 110°C continuous operating temperature.
- Flexible conductor (to be used in fixed application).
- Submersible to 500m

**CHARACTERISTICS**

**Construction characteristics**

Conductor material	Copper
Type of conductor	Stranded flexible
Insulation	X-HF-110
Sheath colour	Green / Yellow
Outer sheath	HFS-110-TP
Conductor flexibility	Class 5
Conductor shape	Circular



Conductor flexibility  
**Class 5**



Rated Voltage Uo/U (Um)  
 0.6/ 1 (1.2) kV



Cable flexibility  
**Flexible for fixed application**



Mechanical resistance to impacts  
**Very good**



Max. conductor temp. in service  
**110 °C**



Smoke density  
**Low**



U.V resistance  
**Yes**



Maximum operating temperature  
**110 °C**

**Construction characteristics**

With Green/Yellow core	No
With smaller neutral conductor	No

**Dimensional characteristics**

Conductor cross-section	95 mm <sup>2</sup>
Maximum diameter of wires	0.31 mm
Nominal overall diameter	18.3 mm
Approximate weight	0.99 kg/m
Neutral conductor section (when smaller)	- mm <sup>2</sup>
Number of cores	1

**Electrical characteristics**

Conductor AC resistance at 50 Hz	0.28 Ohm/km
Inductive reactance at 50Hz - flat touching	0.1 Ohm/km
Inductive reactance at 50Hz - trefoil	0.0849 Ohm/km
Insulation resistance at 20°C	210 MOhm.km
Max. DC resistance of the conductor at 20°C	0.206 Ohm/km
Rated Voltage U <sub>0</sub> /U (U <sub>m</sub> )	0.6/ 1 (1.2) kV

**Mechanical characteristics**

Cable flexibility	Flexible for fixed application
Maximum Pulling Tension	4.75 kN
Mechanical resistance to impacts	Very good

**Usage characteristics**

Fire safety	-
Max. conductor temperature in service	110 °C
Smoke density	Low
U.V resistance	Yes
Minimum Bending Radius during installation	9 (xD)
Bending factor when installed	D>25mm: 6 (xD); D<25mm: 4 (xD)
Maximum operating temperature	110 °C
Minimum operating temperature	-25 °C



Conductor flexibility  
**Class 5**



Rated Voltage U<sub>0</sub>/U (U<sub>m</sub>)  
 0.6/ 1 (1.2) kV



Cable flexibility  
**Flexible for fixed application**



Mechanical resistance to impacts  
**Very good**



Max.conductor temp.in service  
**110 °C**



Smoke density  
**Low**



U.V resistance  
**Yes**



Maximum operating temperature  
**110 °C**

**CURRENT CARRYING CAPACITIES SINGLE PHASE (IN AMPS) - SINGLE CORE CU ENVIROLEX 110°C**

Copper conductor - Circular Flexible stranded conductor Insulation X-HF-110 - Max. Conductor Temperature 110C

Conductor cross-section [mm <sup>2</sup> ]							
	Cu	Cu	Cu	Cu	Cu	Cu	Cu
95	423	352	334	441	331	331	-

  

 Unenclosed spaced from surface	 Unenclosed touching	 Enclosed conduit in air
 Buried direct	 Buried in multi-way duct	 Buried in single-way duct
 Cable surrounded by thermal insulation, unenclosed		

**CURRENT CARRYING CAPACITIES THREE PHASE (IN AMPS) - SINGLE CORE CU ENVIROLEX 110°C**

Copper conductor - Circular Flexible stranded conductor Insulation X-HF-110 Max. Conductor Temperature 110C

Conductor cross-section [mm <sup>2</sup> ]							
	Cu	Cu	Cu	Cu	Cu	Cu	Cu
95	378	352	296	369	284	284	-

  

 Unenclosed spaced from surface	 Unenclosed touching	 Enclosed conduit in air
 Buried direct	 Buried in multi-way duct	 Buried in single-way duct
 Cable surrounded by thermal insulation, unenclosed		



Conductor flexibility  
**Class 5**



Rated Voltage U<sub>0</sub>/U<sub>m</sub>  
0.6/ 1 (1.2) kV



Cable flexibility  
**Flexible for fixed application**



Mechanical resistance to impacts  
**Very good**



Max. conductor temp. in service  
**110 °C**



Smoke density  
**Low**



U.V resistance  
**Yes**



Maximum operating temperature  
**110 °C**

## NOTE

1. Content from AS/NZS 3008.1.2:2010 has been reproduced with the permission from Standards New Zealand under Copyright Licence 00926. Please see the standard for full details.
2. The current ratings in the above tables are only for flexible cables installed in a fixed installation
3. The values in the above table are based on typical New Zealand conditions of:-  
Ambient Air Temperature 30°C  
Soil Temperature 15°C  
Soil Thermal resistivity 1.2 K.m/W  
Depth of Burial 0.5 m

## SELLING AND DELIVERY INFORMATION

Nexans Fire Safety Offer ENVIROLEX® Low Fire Hazard Cables PVC-free Red List Free and Declare Labelled Green Star Flexible conductor