

ENVIROLEX® Flexible Single Core - 110°C

CU ENVIRO RHE-1-FLEX 35 BK 110

Nexans Ref.: BZHX04AA001CXNA

Country Ref.: 9388

Plain Annealed Copper conductor (Flexible), X-110 (XLPE) insulation, Halogen Free Flame Retardant HFS-110-TP sheath. 0.6/1 kV. Made to AS/NZS 5000.1

DESCRIPTION

Applications

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, No Corrosive Emissions
- Low Smoke, Low Calorific Value
- Halogen free, PVC Best Practice (As per Green Building Council requirements)
- Easy to handle and install; No Mica Tape
- 110°C continuous operating temperature.
- Flexible Conductor (to be used in fixed application).
- Submersible to 500m



STANDARDS

National AS/NZS 5000.1

CHARACTERISTICS

Construction characteristics

Conductor material	Copper
Type of conductor	Stranded flexible
Insulation	X-HF-110
Sheath colour	Black
Outer sheath	HFS-110-TP
Halogen free	-
With Green/Yellow core	No
With smaller neutral conductor	No

Dimensional characteristics

Conductor cross-section	35 mm ²
Maximum diameter of wires	0.21 mm
Nominal overall diameter	12.6 mm
Approximate weight	0.4 kg/m



Halogen free
-



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



Cable flexibility
Flexible



Mechanical
resistance to
impacts
Very good



Flame retardant
Yes



Max. conductor
temp. in service
110 °C



Smoke density
Low



U.V resistance
Yes

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

Generated 5/11/21 www.nexans.co.nz Page 1 / 4

ENVIROLEX® Flexible Single Core - 110°C

CU ENVIRO RHE-1-FLEX 35 BK 110

Dimensional characteristics

Neutral conductor section (when smaller)	- mm ²
Number of cores	1

Electrical characteristics

Conductor AC resistance at 50 Hz	0.75 Ohm/km
Inductive reactance at 50Hz - flat touching	0.108 Ohm/km
Inductive reactance at 50Hz - trefoil	0.093 Ohm/km
Insulation resistance at 20°C	270 MOhm.km
Max. DC resistance of the conductor at 20°C	0.554 Ohm/km
Rated Voltage U ₀ /U (U _m)	0.6/ 1 (1.2) kV

Mechanical characteristics

Cable flexibility	Flexible
Maximum Pulling Tension	2.45 kN
Mechanical resistance to impacts	Very good

Usage characteristics

Flame retardant	Yes
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



Halogen free
-



Rated Voltage U₀/U
(U_m)
0.6/ 1 (1.2) kV



Cable flexibility
Flexible



Mechanical
resistance to
impacts
Very good



Flame retardant
Yes



Max. conductor
temp. in service
110 °C



Smoke density
Low



U.V resistance
Yes

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.








Generated 5/11/21 www.nexans.co.nz Page 2 / 4








ENVIROLEX® Flexible Single Core - 110°C

CU ENVIRO RHE-1-FLEX 35 BK 110

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 ²]							
	Cu	Cu	Cu	Cu	Cu	Cu	Cu
35	225	184	179	252	187	187	94

 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 ²]							
	Cu	Cu	Cu	Cu	Cu	Cu	Cu
35	197	184	158	213	160	160	94

 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		



Halogen free
-



Rated Voltage U₀/U
(Um)
0.6/ 1 (1.2) kV



Cable flexibility
Flexible



Mechanical
resistance to
impacts
Very good



Flame retardant
Yes



Max. conductor
temp. in service
110 °C



Smoke density
Low



U.V resistance
Yes

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

Generated 5/11/21 www.nexans.co.nz Page 3 / 4

ENVIROLEX® Flexible Single Core - 110°C

CU ENVIRO RHE-1-FLEX 35 BK 110

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