Ecoflex® 10 Plus Heatex®

flame-retardant, halogen-free, suitable for installation in buildings and for railway applications

Ecoflex 10 Plus Heatex is a halogen-free and flame-retardant coaxial cable designed for installation in buildings, facilities, and high-risk areas.

Ecoflex cables with Heatex jackets are flame-resistant and have minimal fire propagation. Heatex jackets are low-smoke, ensuring visibility of escape routes in case of a fire. Heatex jackets are halogen-free and do not contain reactive elements such as fluorine, chlorine, and bromine. They do not produce corrosive gases that could lead to significant property damage. The UV stability of the robust Heatex jacket allows for exterior use without limitations.

Ecoflex 10 Plus Heatex features a 7-strand hybrid inner conductor with an aluminium core and welded copper jacket. The surface characteristics and corresponding RF properties are significantly better than those of conventional copper strands. Another advantage is the double shielding: an overlapping copper foil and an overlying copper braid ensure a high shielding effectiveness of > 90 dB at 1 GHz.

Due to its Cca fire protection class, Ecoflex 10 Plus Heatex is suitable for installation in public buildings. Ecoflex 10 Plus Heatex is certified for railway applications for interior/exterior use according to the R15 and R16 requirement sets of EN 45545-2 standard.

Key features

Diameter	10.2 ± 0.2 mm
Impedance	50 ± 2 Ω
Attenuation at 1 GHz/100 m	13.49 dB
f max	**8 GHz**
Euroclass according to EN 50575	**Cca**

Characteristics

- Certified according to EN 45545-2:2013+A1:2015 and EN 45545-2:2020 Requirement Sets R15 + R16 for railway applications
- Flame resistance tested according to EN 60332-1-2:2004 + A1:2015 + A11:2016 and EN 60332-1-3:2004 + A1:2015
- Smoke density tested according to DIN EN 61034-2:2005
- Smoke gas toxicity tested according to EN 50305:2002 Sec. 9.2
- Vertical flame spread tested according to EN 50305:2002 Sec. 9.1.1. (for cables with a diameter 6 mm < Ø < 12 mm)
- Halogen-free tested according to DIN EN 50306-1:2003
- Halogen acid gas content tested according to DIN EN 60754-1:2015 (HCl < 0.5 %)
- Acidity of the combustion gases tested according to DIN EN 60754-2:2015 (pH value > 4.3)
- Conductivity of the combustion gases tested according to DIN EN 60754-2:2015 (< 10.0 µS/mm)
- Fluorine content tested according to EN 60684-2:2011 Sec. 45.2 Procedure A (< 0.1 %)
- Jacket material according to DIN EN 50290-2-27 (HD 624.7)
- RoHS compliant (Directive 2011/65/EC & 2015/863/EU RoHS 3)
- Fire-resistant, low smoke, halogen-free (LSZH)
- UV-resistant

Technical Data

Inner conductor	Hybrid CCA – copper-clad aluminium stranded wire
Inner conductor Ø	2.85 mm (7 × 1.0 mm, 10 AWG)
Dielectric	foamed cellular polyethylene (PE) with skin
Dielectric Ø	7.2 mm
Outer conductor 1	overlapping copper (Cu) foil
Shielding factor	100 %
Outer conductor 2	Copper (Cu) shield braiding of bare copper wires
Shielding factor	75 %
Outer conductor Ø	7.9 mm
Jacket	highly flexible thermoplastic copolymer (FRNC) black
Weight	106 kg/km
Min. Bending radius	4 × Ø single, 8 × Ø repeated
Temperature range	-55 to +85 °C transport & fixed installation -40 to +85 °C mobile application
Pulling strength	600 N

Electrical Data at 20 °C

Capacitance (1 kHz)	78 nF/km
Velocity factor	0.85
Shielding attenuation 1 GHz	≥ 90 dB
DC-resistance inner conductor	≤ 5.1 Ω/km
DC-resistance outer conductor	6.6 Ω/km
Insulation resistance	≥ 10 GΩ*km
Test Voltage DC (wire/screen)	7 kV
Max. voltage	5 kV

	Ecoflex 10 Plus Heatex	RG 213/U	RG 58/U
Capacitance	78 pF/m	101 pF/m	102 pF/m
Velocity factor	0.85	0.66	0.66
Attenuation (dB/100m)			
10 MHz	1.14	2.00	5.00
100 MHz	3.80	7.00	17.00
500 MHz	9.12	17.00	39.00
1000 MHz	13.49	22.50	54.60
3000 MHz	25.37	58.50	118.00

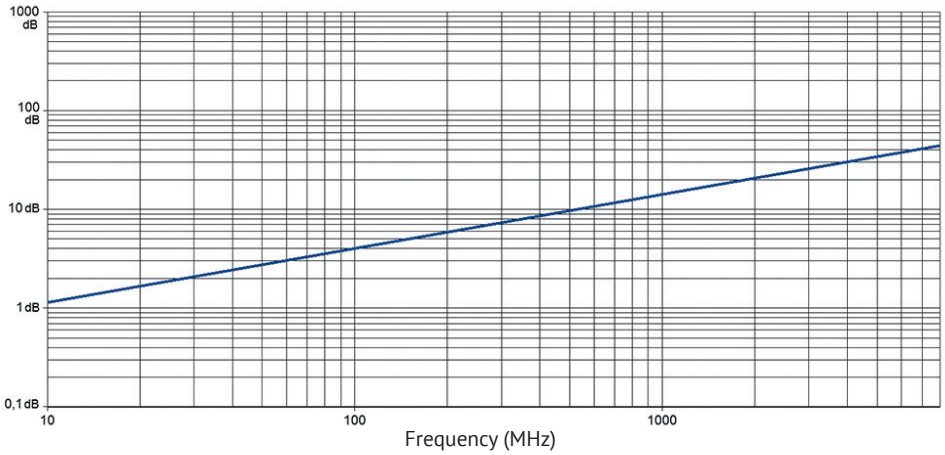
Typ. Attenuation (dB/100 m at 20 °C)

5 MHz	0.76	1000 MHz	13.49
10 MHz	1.14	1296 MHz	15.68
50 MHz	2.66	1500 MHz	17.01
100 MHz	3.80	1800 MHz	18.91
144 MHz	4.66	2000 MHz	20.14
200 MHz	5.51	2400 MHz	22.42
300 MHz	6.94	3000 MHz	25.37
432 MHz	8.46	4000 MHz	29.55
500 MHz	9.12	5000 MHz	33.44
800 MHz	11.88	6000 MHz	37.05
		8000 MHz	44.08

Max. Power Handling (W at 40 °C)

10 MHz	3.100	2400 MHz	175
100 MHz	960	3000 MHz	154
500 MHz	413	4000 MHz	130
1000 MHz	285	5000 MHz	115
2000 MHz	194	6000 MHz	100
		8000 MHz	86

Typ. Attenuation (dB/100 m at 20°C)



Typ. Return Loss