

Ecoflex[®] 15 Plus Heatex[®]

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



Ecoflex 15 Plus Heatex is a halogen-free and flame-retardant coaxial cable designed for installation in buildings, facilities, and areas at risk. Ecoflex cables with Heatex jackets are flame-resistant and have low flame propagation. Heatex jackets produce low smoke, ensuring clear escape routes in case of a fire. Being halogen-free, they do not contain reactive elements like fluorine, chlorine, and bromine, preventing the generation of corrosive gases that can lead to significant damage. The UV stability of the durable Heatex jacket also allows for unrestricted exterior use.

Ecoflex 15 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 factor of > 90 dB at 1 GHz.

Due to its fire protection class Cca, Ecoflex 15 Plus Heatex is suitable for installation in public buildings. It is certified for railway applications for interior/exterior use according to the requirements sets R15 and R16 of the EN 45545-2 standard.

Key features

Diameter	14.6 ± 0.3 mm
Impedance	50 ± 2 Ω
Attenuation at 1 GHz/100 m	9.80 dB
f max	8 GHz
Euroclass according to EN 50575	Cca
Fire safety acc. to 45545-2	R15/R16 - HL3

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 60332-3-24:2009 (Test method C, cable 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	4.5 mm (7 × 1.5 mm)
Dielectric	foamed cellular polyethylene (PE) with skin
Dielectric Ø	11.3 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	12.1 mm
Jacket	highly flexible thermoplastic copolymer (FRNC) black
Weight	184 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	1300 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	≤ 2.5 Ω/km
DC-resistance outer conductor	5.0 Ω/km
Insulation resistance	≥ 10 GΩ*km
Test Voltage DC (wire/screen)	7 kV
Max. voltage	5 kV

Ecoflex 15 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	0.86	2.00	5.00
100 MHz	2.81	7.00	17.00
500 MHz	6.70	17.00	39.00
1000 MHz	9.80	22.50	54.60
3000 MHz	18.30	58.50	118.00

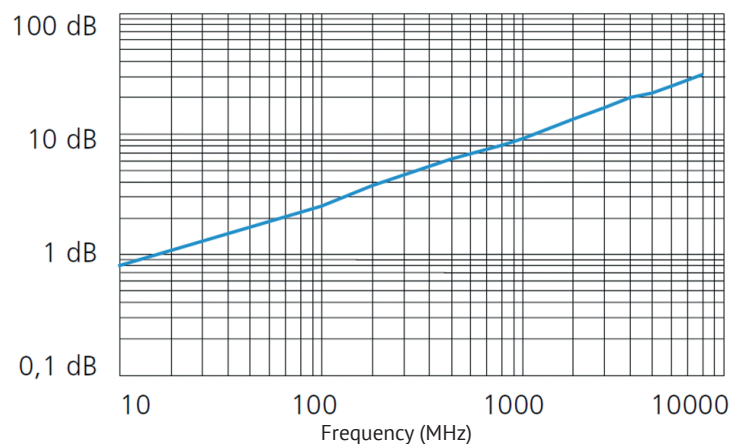
Typ. Attenuation (dB/100 m at 20 °C)

5 MHz	0.60	1000 MHz	9.80
10 MHz	0.86	1296 MHz	11.40
50 MHz	1.96	1500 MHz	12.40
100 MHz	2.81	1800 MHz	13.80
144 MHz	3.40	2000 MHz	14.60
200 MHz	4.05	2400 MHz	16.20
300 MHz	5.00	3000 MHz	18.30
432 MHz	6.10	4000 MHz	21.60
500 MHz	6.70	5000 MHz	24.60
800 MHz	8.60	6000 MHz	27.50
		8000 MHz	32.70

Max. Power Handling (W at 40 °C)

10 MHz	5.021	2400 MHz	270
100 MHz	1.542	3000 MHz	236
500 MHz	655	4000 MHz	198
1000 MHz	446	5000 MHz	173
2000 MHz	300	6000 MHz	154
		8000 MHz	129

Typ. Attenuation (dB/100 m at 20 °C)



Typ. Return Loss

