

Ecoflex® 15 Plus Heatex®

flame retardant, free of halogen and qualified for use in public buildings and railway applications



Ecoflex 15 Plus Heatex is a flame retardant and halogen-free coaxial cable for use in public buildings. Ecoflex cables with Heatex jackets are flame retardant and have low fire propagation properties. They emit limited smoke, so that escape and emergency routes remain visible in case of fire. Heatex jackets are free of halogen and contain no reactive elements such as fluorine, chlorine and bromine. Ecoflex Plus Heatex cables reduce flame spread drastically allowing people more time to escape areas of fire. Ecoflex Plus Heatex cables feature UV stabilization and are suitable for both indoor and outdoor use. Ecoflex 15 Plus Heatex uses a hybrid CCA inner conductor containing 7 stranded copper-clad aluminium wires. Each wire has an aluminium core covered by copper cladding which combines copper's good electrical conductivity and aluminium's light weight. Another advantage of Ecoflex 15 Plus Heatex is its double shielding: an overlapping copper foil and an additional shield braiding of bare copper wires with 75 % coverage ensure a high screening attenuation of > 90 dB at 1 GHz. With the fire protection rating Cca Ecoflex 15 Plus Heatex is approved for installation in public buildings. Ecoflex 15 Plus Heatex is certified for railway applications for interior and exterior use according requirement sets R15 and R16 of the EN45545-2 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 acc. 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 retardancy 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 toxicity tested according to EN 50305:2002 Section 9.2

Vertical flame propagation tested according to EN 60332-3-24:2009 (Category C, cables with $\varnothing \geq 12$ 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 gases tested according to DIN EN 60754-2:2015 (pH value > 4,3)

Conductivity of gases tested according DIN EN 60754-2:2015 (< 10,0 μ S/mm)

Fluorine content tested according to EN 60684-2:2011 Clause 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)

Low Smoke, Fire retardant, Zero Halogen (LSZH)

UV-resistant

Technical data

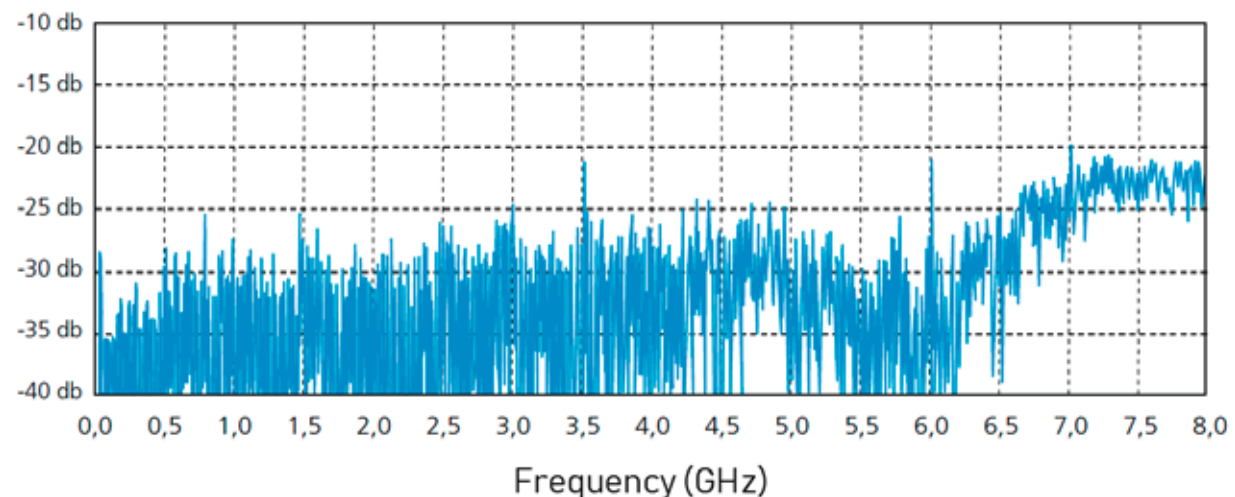
Inner conductor	Hybrid CCA – stranded copper-clad aluminium wire
Inner conductor Ø	4,5 mm (7 x 1,5 mm)
Dielectric	foamed Polyethylene (PE) with skin
Dielectric Ø	11,3 mm
Outer conductor 1	copper foil overlapped
Shielding factor	100%
Outer conductor 2	shield braiding of bare copper wires
Shielding factor	75%
Outer conductor Ø	12,1 mm
Jacket	highly flexible thermoplastic copolymer (FRNC) black
Weight	184 kg/km
Min. Bending radius	4XØ single, 8XØ repeated
Temperature range	-55 to +85°C Transport & fixed installation -40 to +85°C Flexible use
Pulling strength	1300 N

Electrical data at 20°C

Capacity (1 kHz)	78 nF/km
Velocity factor	0,85
Screening 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
Capacity	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. Return loss



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)

