Ecoflex® 10 Plus Heatex®

flame retardant, free of halogen and qualified for use in public buildings and hazardous areas

Ecoflex 10 Plus Heatex is a flame retardant and halogen-free coaxial cable for use in public buildings, plants, ships and hazardous areas. Due to a strong demand for low loss cables which meet all relevant fire protection requirements we developed Ecoflex Plus Heatex cable line with improved fire behaviour and reduced production of toxic gases. 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. They do not produce corrosive gases and fumes which are extremely hazardous to human health and are more deadly than the fire itself. 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 10 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. The resulting RF characteristics are significantly better compared to cables with the stranded bare copper inner conductor.

Ecoflex 10 Plus Heatex not only has excellent HF properties, it also meets all relevant fire safety standards:

Fire behaviour
EN 50265-2-1 IEC 60332-1 DIN 5510-2
Cable bundle test
IEC 60332-3-24
Smoke density
IEC 61034-1+2 EN 50268
Corrosivity of fumes
HD 602-1 EN 50267-2-3 IEC 60754-2

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 acc. to EN 50575	**Cca**

Characteristics

- Jacket material according to DIN EN 50290-2-27 (HD 624.7)
- Flame retardant according to IEC 60332-1-2
- Manufactured according to DIN EN 45545-2 Table 5 R15 HL2
- RoHS compliant (Directive 2011/65/EC)
- Low Smoke, Fire retardant, Zero Halogen (LSZH)
- Corrosivity of fumes according to IEC 60754-2
- Smoke density according to IEC 61034
- UV-resistant

Technical data

Inner conductor	Hybrid CCA – stranded copper-clad aluminium wire
Inner conductor Ø	2,85 mm (7 x 1,0 mm, 10 AWG)
Dielectric	foamed Polyethylene (PE) with skin
Dielectric Ø	7,2 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	7,9 mm
Jacket	highly flexible thermoplastic copolymer (FRNC) black
Weight	106 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	600 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	≤ 5,1 Ω/km
DC-resistance Outer conductor	6,6 Ω/km
Insulation resistance	≥ 10 GΩ*km
Test voltage (Inner conductor/Outer conductor rms 50 Hz 1 Min.)	1000 V
Max. Voltage	5 kV

Typ. Attenuation (db/100 m at 20°C)

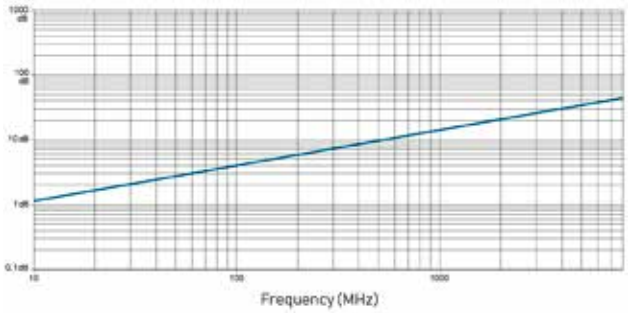
5 MHz	0,76	1000 MHz	13,49
10 MHz	1,14	1296 MHz	15,68
50 MHz	2,66	1500 MHz	17,01
100 MHz	3,80	1800 MHz	18,91
144 MHz	4,66	2000 MHz	20,14
200 MHz	5,51	2400 MHz	22,42
300 MHz	6,94	3000 MHz	25,37
432 MHz	8,46	4000 MHz	29,55
500 MHz	9,12	5000 MHz	33,44
800 MHz	11,88	6000 MHz	37,05
		8000 MHz	44,08

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

	Ecoflex 10 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	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)



Typ. Return loss