

Ecoflex® 15 Plus Heatex®

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



Ecoflex 15 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 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. The resulting RF characteristics are significantly better compared to cables with the stranded bare copper inner conductor.

Ecoflex 15 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 | 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

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 & 2015/863/EU RoHS 3)

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 | 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 (Inner conductor/Outer conductor rms 50 Hz 1 Min.) | 1000 V |
| Max. Voltage | 5 kV |

Ecoflex 15 Plus Heatex RG 213/U RG 58/U

| | 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 |

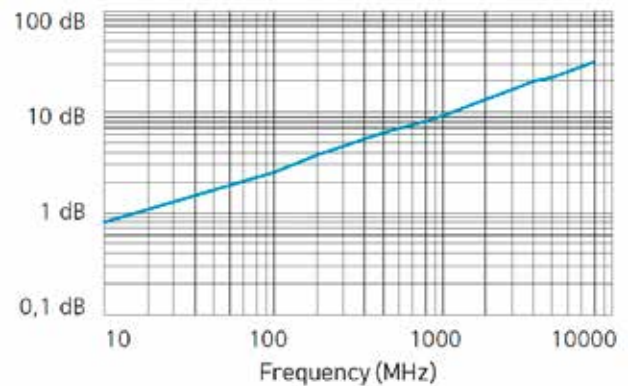
Typ. Attenuation (db/100 m at 20°C)

| | | | |
|---------|------|----------|-------|
| 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

