

Ecoflex[®] 10 Plus

extremely flexible, low-loss,
and suitable for up to 8 GHz



Ecoflex 10 Plus is a highly flexible, low-loss coaxial cable specifically designed for operation up to 8 GHz. State-of-the-art production methods and the use of a low attenuation PE-LLC dielectric with a gas content of over 70% enable very low attenuation values. The Ecoflex 10 Plus sets new standards for flexible coaxial cables.

The high flexibility of Ecoflex 10 Plus is ensured by a 7-strand hybrid inner conductor with an aluminium core and welded copper jacket. The inner conductor is twisted, compressed, calibrated, and then provided with a pre-coating in precise production steps to achieve very good attenuation and matching values. 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. The copper foil has a PE coating that prevents cracks in the copper foil from forming due to small bending radii. The black PVC outer jacket of Ecoflex 10 Plus is UV-stabilized.

In addition to a complete range of standard connectors, a user-friendly solder-free N connector has been specially developed for the Ecoflex 10 Plus. The connector can be installed in a few minutes without special tools. Ecoflex 10 Plus is the innovative coaxial cable for all applications in high-frequency technology: low attenuation, ultra-flexible, radiation-resistant, and usable in the microwave range.

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	Eca

Characteristics

- Jacket material according to DIN EN 50290-2-22 (VDE 0819), compound type TM 52 (HD 624.2)
- Flame-retardant according to IEC 60332-1-2
- RoHS compliant (Directive 2011/65/EC & 2015/863/EU RoHS 3)
- 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	PVC black, UV-stabilized
Weight	96 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	≤ 5.4 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 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

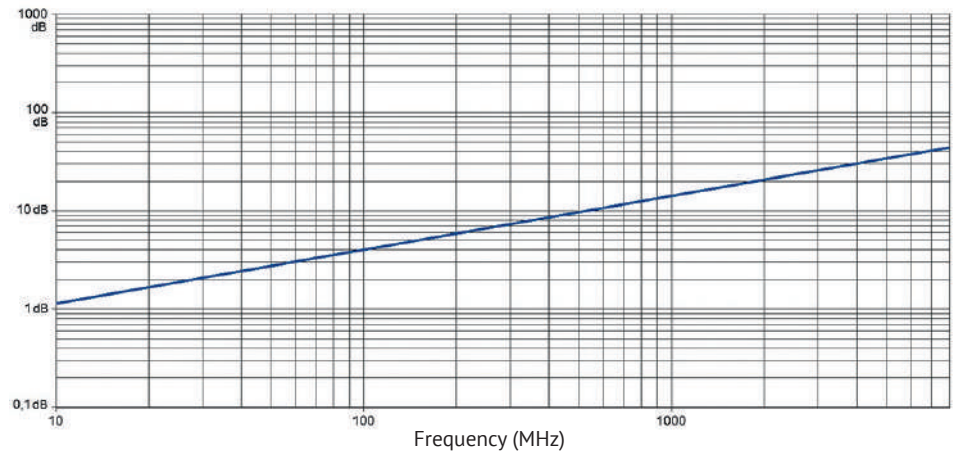
Typ. Attenuation (dB/100 m at 20 °C)

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

