

Ecoflex[®] 10

extremely flexible and low-loss



Ecoflex 10 is a flexible and very low-loss 50 ohm coaxial cable designed for the frequency range up to 6 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 low attenuation values that set standards for flexible coaxial cables of this size.

The high flexibility of Ecoflex 10 is ensured by a 7-strand stranded inner conductor made of low-oxygen copper. The inner conductor is compressed, calibrated, and then provided with a pre-coating in a special process to achieve 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 black PVC outer jacket of Ecoflex 10 is UV-stabilized. To simplify installation, a high-quality solder-free N connector has been developed, which can be assembled in a few minutes without special tools. Ecoflex 10 is a modern coaxial cable for all applications in high-frequency technology: low attenuation, flexible, radiation-resistant, and usable into the microwave range.

Key features

Diameter	10.2 ± 0.2 mm
Impedance	50 ± 2 Ω
Attenuation at 1 GHz/100 m	12.90 dB
f max	6 GHz
Euroclass according to EN 50575	Eca

Characteristics

- Conductor material according to DIN EN 13602 Cu-ETP-A
- 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
- Flame-retardant according to UN/ECE-R 118:2019-06 § 6.2.6, ISO 6722-1:2011-10 § 5.22
- RoHS compliant (Directive 2011/65/EC & 2015/863/EU RoHS 3)
- UV-resistant

Technical Data

Inner conductor	stranded (Cu) copper 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	129 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	≤ 3.5 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 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

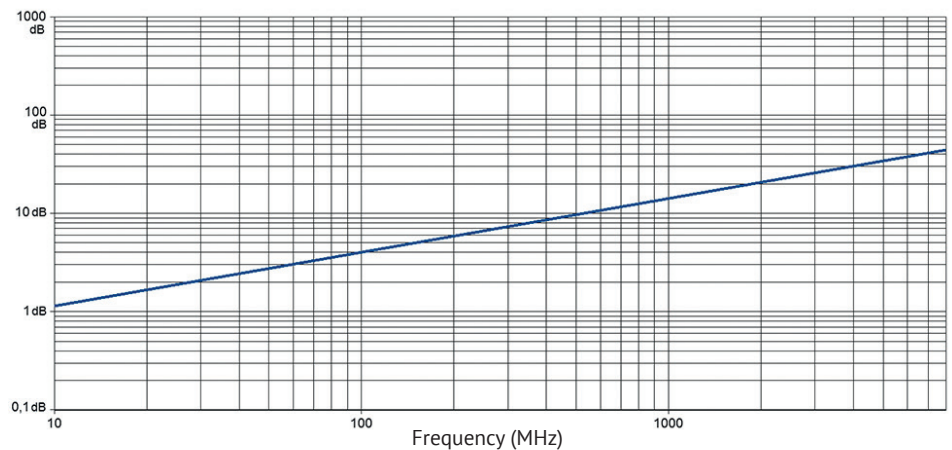
Typ. Attenuation (dB/100 m at 20 °C)

5 MHz	0.73	1000 MHz	12.90
10 MHz	1.09	1296 MHz	14.99
50 MHz	2.54	1500 MHz	16.26
100 MHz	3.63	1800 MHz	18.08
144 MHz	4.45	2000 MHz	19.25
200 MHz	5.27	2400 MHz	21.43
300 MHz	6.63	3000 MHz	24.25
432 MHz	8.09	4000 MHz	28.25
500 MHz	8.72	5000 MHz	31.97
800 MHz	11.36	6000 MHz	35.42

Max. Power Handling (W at 40 °C)

10 MHz	3.960	2400 MHz	210
100 MHz	1.210	3000 MHz	180
500 MHz	510	4000 MHz	150
1000 MHz	350	5000 MHz	130
2000 MHz	230	6000 MHz	120

Typ. Attenuation (dB/100 m at 20 °C)



Typ. Return Loss

