

Ecoflex[®] 15

flexible, low-loss,
and stray radiation resistant



Ecoflex 15 is a flexible and very low-loss 50 ohm coaxial cable 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.

The special design of Ecoflex 15 combines the excellent attenuation values of rigid 1/2" cables with a solid inner conductor with the easy installation of flexible coaxial cables with stranded inner conductors. The good flexibility of Ecoflex 15 is ensured by a 7-strand stranded inner conductor made of low-oxygen copper. The inner conductor is compressed, calibrated, and then coated 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 15 is UV-stabilized. To simplify installation, solder-free connectors of the N, UHF, and 7-16 DIN standards have been developed, which can be assembled without special tools in a short time. Ecoflex 15 is a modern coaxial cable for all applications in high-frequency technology: low attenuation, flexible, electromagnetic interference-resistant, and usable up to the microwave range.

Especially for longer runs and critical connections where every "dB" counts, Ecoflex 15 offers significant advantages.

Key features

Diameter	14.6 ± 0.3 mm
Impedance	50 ± 2 Ω
Attenuation at 1 GHz/100 m	9.80 dB
f max	6 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	stranded (Cu) copper wire
Inner conductor Ø	4.5 mm (7 × 1.5 mm)
Dielectric	foamed cellular polyethylene (PE) with skin
Dielectric Ø	11.3 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	12.1 mm
Jacket	PVC black, UV-stabilized
Weight	245 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	1300 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	≤ 1.5 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 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	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

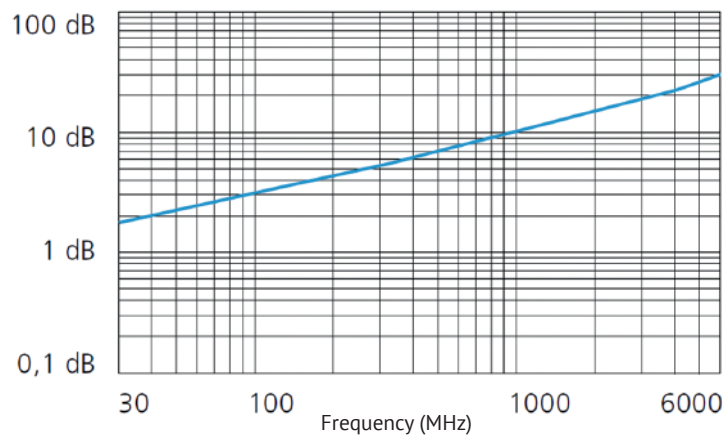
Typ. Attenuation (dB/100 m at 20 °C)

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

Max. Power Handling (W at 40 °C)

10 MHz	6.327	2400 MHz	326
100 MHz	1.928	3000 MHz	284
500 MHz	810	4000 MHz	237
1000 MHz	547	5000 MHz	206
2000 MHz	364	6000 MHz	183

Typ. Attenuation (dB/100 m at 20 °C)



Typ. Return Loss

