

# Ecoflex® 15 Plus

## Ecoflex®15 Plus - the innovative Coaxial Cable of the latest generation

The new Ecoflex®15 Plus has remarkably improved specifications, electrical- and mechanical-wise: Ecoflex®15 Plus takes advantage of a high-precision-Hybrid inner conductor with aluminium core and welded copper shield.

Ecoflex®15 Plus is an extremely flexible low-loss 50 Ohm coaxial cable for an operation range up to 8 GHz. Most modern production methods and usage of a low-loss PE-LLC dielectric with a gas proportion of more than 70% allow very favourable loss values.

The innovative cable structure of Ecoflex®15 Plus combines the low loss characteristics of 1/2" cables with fixed inner conductors with the mechanical attributes of flexible, but high-loss standard-coaxial cables with stranded inner conductor. So this cable represents an ideal combination. The high flexibility of Ecoflex®15 Plus is guaranteed by a 7-wire Hybrid inner conductor with aluminium core and welded copper shield. Using precise production steps, the inner conductor has to be stranded, compressed, calibrated and finally provided with a precoating, to achieve the excellent values for loss and matching.

A further „Plus“ is the double shielding: an overlapping copper foil and a copper braid above ensure a high shielding factor of > 90 dB at 1 GHz. The black PVC outer cover of Ecoflex®15 Plus is UV-resistant. For a simplified installation we developed solderless connectors in the standards „N“, „UHF“ and „7-16DIN“, which can be assembled in a short time without any special tools.

Ecoflex®15 Plus is a modern coaxial cable for all HF applications: low-loss, flexible, stray radiation safe and suitable up into the microwave range. Available in standard lengths of 25 m, 50 m, 100 m, 200 m, 500 m and 1000 m.

### Ecoflex®15 characteristics

Diameter .....	14,6 mm
Impedance .....	50 Ω
Attenuation @ 1 GHz/100 m .....	9,1 dB
fmax .....	8 GHz

## Remarkable electrical and mechanical qualities!

### Improvements, compared to ECOFLEX®15 (Standard):

Expanded frequency range:	6 GHz auf 8 GHz
Considerable lower attenuation	- 7% @1 GHz - 11% @6 GHz
Improved return loss	
Higher power handling capacit	+ 9% @1 GHz
Reduced weight	- 22%
Higher flexibility, even better to lay	

# Ecoflex®15 Plus

## Technical data

Centre conductor .....	Hybrid, aluminium core, .....copper shield, 7 x 1,55 mm
Centre conductor Ø .....	4,5 mm
Dielectric .....	PE, low-loss Compound
Dielectric Ø .....	11,3 mm
Outer conductor 1 .....	Cu-Folie, PE-beschichtet
Shielding factor .....	100 %
Outer conductor 2 .....	Cu-Geflecht
Shielding factor .....	72 %
Sheath .....	PVC schwarz, UV-stabilisiert
Outer diameter Ø .....	14,6 mm
Weight.....	200 g/m
Min. bending radius.....one single bending .....	70 mm
15 repeated bendings.....	140 mm
Temperature range .....	storage .....
.....installation .....	-70 bis +85°C
.....operation .....	-40 bis +60°C
.....	-55 bis +85°C
Pulling strength .....	10 daN

## Electrical specifications

Impedance .....	50 Ω
Capacity .....	77 pF/m
Velocity factor .....	0,86
fmax .....	8 GHz
Screening efficiency @ 1 GHz .....	> 90 dB
DC-resistance: Centre conductor .....	2,2 Ω/km
Outer conductor .....	5,15 Ω/km
RF peak voltage .....	1,55 kV

## Ecoflex® 15 Plus RG 213/U RG 58/U

Capacity .....	77 pF/m.....	101 pF/m .....	102 pF/m
Velocity factor .....	0,86 .....	0,66 .....	0,66
Attenuation (dB/100 m)			
10 MHz .....	0,83 .....	2,0 .....	5,0
100 MHz .....	2,67 .....	7,0 .....	17,0
500 MHz .....	6,2 .....	17,0 .....	39,0
1000 MHz .....	9,1 .....	22,5 .....	54,6
3000 MHz .....	16,9 .....	58,5 .....	118

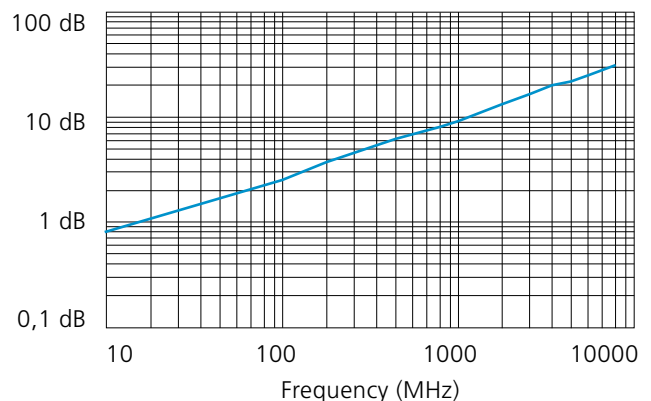
## Typ. attenuation (dB/100 m @ 20°C)

5 MHz .....	0,58	1000 MHz .....	9,1
10 MHz .....	0,83	1296 MHz .....	10,5
50 MHz .....	1,87	1500 MHz .....	11,4
100 MHz .....	2,67	1800 MHz .....	12,6
144 MHz .....	3,23	2000 MHz .....	13,4
200 MHz .....	3,83	2400 MHz .....	14,9
300 MHz .....	4,75	3000 MHz .....	16,9
432 MHz .....	5,8	4000 MHz .....	20,0
500 MHz .....	6,2	5000 MHz .....	22,9
800 MHz .....	8,0	6000 MHz .....	25,6
		8000 MHz .....	30,5

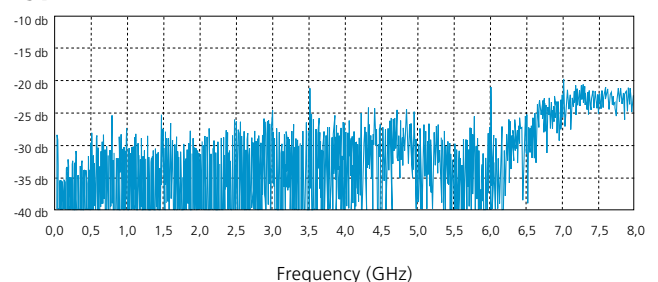
## Max. power handling (W @ 40°C)

10 MHz .....	6710	2000 MHz .....	410
100 MHz .....	2070	3000 MHz .....	330
500 MHz .....	890	4000 MHz .....	280
1000 MHz .....	610	6000 MHz .....	220
		8000 MHz .....	180

## Typ. Attenuation (dB/100 m) @ 20°C



## Typ. Return loss



Due to production tolerances the RTL may have different characteristics.