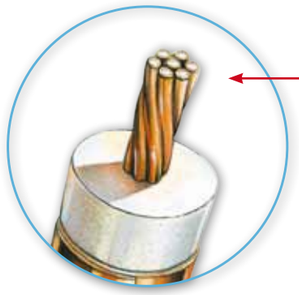
Ecoflex 15 Plus



Stranded center conductor
with aluminium core and
weldet copper shield

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 solid 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 Plus 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 up to 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 handle	

Grounding clamp for Ecoflex 15 Plus, part. no. 6915

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	copper foil, PE-coated
Shielding factor	100 %
Outer conductor 2	copper braid
Shielding factor	72 %
Sheath	black heatex PVC, UV-resistant
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 -70 bis +85°C
	installation -40 bis +60°C
	operation -55 bis +85°C
Pulling strength	10 daN

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)

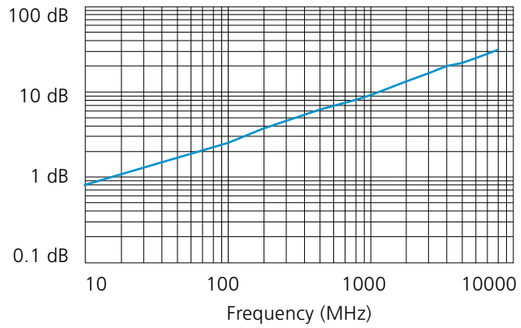
10 MHz	6710	2000 MHz	410
100 MHz	2070	3000 MHz	330
500 MHz	890	4000 MHz	280
1000 MHz	610	6000 MHz	220
		8000 MHz	180

Electrical specifications

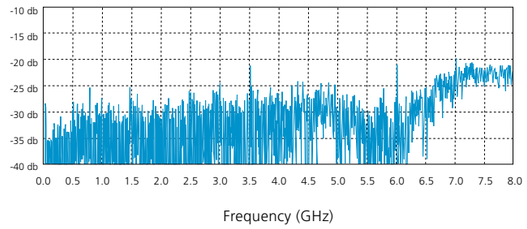
Impedance	50 Ω
Capacity	77 pF/m
Velocity factor	0.86
fmax	8 GHz
Screening efficiency @ 1 GHz	> 90 dB
DC-resistance: Centre conductor	2.2 Ω/km
Outer conductor	5.15 Ω/km
RF peak voltage	1.55 kV

	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



Typ. return loss



Due to production tolerances the return loss may have different characteristics.