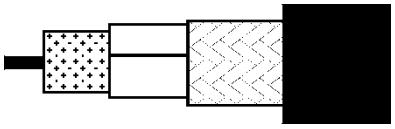
APPLICATION

Coaxial cables used in cabled distribution networks designed according the European Standard EN 50117-2-1 and EN50117-2-4 operating at frequencies between 5 and 3000 MHz.

CONSTRUCTION

1 2 3.1 3.2 4



1	Inner conductor	Solid soft annealed copper
2	Dielectric	Gas injected PE
3.1	Foil	AL-PET-AL
3.2	Braid	Annealed tinned copper
4	Sheath	PVC

REQUIREMENTS AND TEST METHODS

Test methods in accordance with European standard EN 50117-1.

Mechanical characteristics

1. Inner conductor.	
Diameter:	1.00 mm ± 0.03 mm
2. Dielectric:	
Diameter:	4.8 mm ± 0.15 mm
Adhesion:	No shrink back
3. Outer conductor:	
Nominal diameter screen:	5.4 mm
Foil overlap:	≥ 1 mm
Coverage braid:	34 % ± 4 %
4. Sheath:	
Diameter:	6.8 mm ± 0.2 mm
Tensile strength:	≥ 12.5 N/mm^2
Elongation at break:	≥ 150 %
5. Cable:	
Crush resistance of cable:	< 1% (load of 700N)
Storage/operating temperature:	-40°C to +70°C
Minimum installation temperature:	-5 °C
Minimum static bend radius:	35 mm

Electrical characteristics

Mean characteristic impedance:	75 ± 3 Ω
Regularity of impedance:	> 40 dB
DC loop resistance:	≤ 50 Ω/km
DC resistance inner conductor:	≤ 23 Ω/km
DC resistance outer conductor:	≤ 27 Ω/km
Capacitance:	55 pF/m ± 2 pF/m
Velocity ratio:	0.81 ± 0.02
Insulation resistance:	≥ 10^4 MΩ.km
Dielectric strenght:	2 kVdc
Voltage test of the sheath:	3.75 kVdc
Screening efficiency 100-1000 MHz:	≥ 75 dB
Class:	B
Transfer impedance:	40 mΩ/m
Class:	C
Return loss at 5-30 MHz:	≥ 23 dB*
30-470 MHz:	≥ 23 dB*
470-1000 MHz:	≥ 20 dB*
1000-2000 MHz:	≥ 18 dB*
2000-3000 MHz:	≥ 16 dB*

*Max. 3 peak values 4 dB lower than specified.

Longitudinal attenuation:	a = 0.58
$a \cdot \sqrt{f} + b \cdot f + c$	b = 0.0021
where f is frequency in MHz	c = 0.5

Attenuation at	Nominal	Attenuation at	Nominal
5 MHz:	1.8 dB/100m	800 MHz:	18.6 dB/100m
50 MHz:	4.7 dB/100m	862 MHz:	19.3 dB/100m
100 MHz:	6.5 dB/100m	1000 MHz:	20.9 dB/100m
200 MHz:	9.1 dB/100m	1350 MHz:	24.6 dB/100m
230 MHz:	9.8 dB/100m	1750 MHz:	28.4 dB/100m
400 MHz:	12.9 dB/100m	2400 MHz:	34.0 dB/100m
600 MHz:	16.0 dB/100m	3000 MHz:	38.6 dB/100m

Maximum attenuation is 10% higher.

REVISIONS

#	Description	Date	Initials

Belden declares this product to be in compliance with the environmental regulations EU RoHS (Directive 2002/95/EC, 27 January 2003); this is valid for all material produced after the RoHS compliant date for this product.