APPLICATION

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

CONSTRUCTION

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 according the European Standard HD 624.
5	Figure 8	

REQUIREMENTS AND TEST METHODS

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

Mechanical characteristics

1. Inner conductor.	
Diameter:	0.8 mm ± 0.015 mm
2. Dielectric:	
Diameter:	3.5 mm ± 0.15 mm
Adhesion:	6.3 – 63 N at 25 mm
3. Outer conductor:	
Diameter screen:	4.1 mm ± 0.15 mm
Foil overlap:	≥ 2 mm
Coverage braid:	37 % ± 4 %
4. Sheath:	
Diameter:	5.0 mm ± 0.3 mm
Tensile strength:	≥ 12.5 N/mm^2
Elongation at break:	≥ 150 %
5. Figure 8:	
Width:	10.6 ± 0.4 mm
6. 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:	25 mm

Electrical characteristics

Mean characteristic impedance:	75 ± 3 Ω
Regularity of impedance:	> 40 dB
DC loop resistance:	≤ 75 Ω/km
DC resistance inner conductor:	≤ 35 Ω/km
DC resistance outer conductor:	≤ 40 Ω/km
Capacitance:	53 pF/m ± 2 pF/m
Velocity ratio:	0.84 ± 0.02
Insulation resistance:	> 10^4 MΩ.km
Voltage test of dielectric:	2 kVdc
Screening efficiency 30-1000 MHz:	≥ 85 dB
Transfer Impedance	< 50 mOhm/m from 5MHz to 30 MHz.

Return loss at	5-30 MHz:	≥ 20 dB*
	30-470 MHz:	≥ 20 dB*
	470-1000 MHz:	≥ 18 dB*
	1000-2000 MHz:	≥ 16 dB*
	2000-3000 MHz:	≥ 15 dB*

*Max. 3 peak values up to 4 dB lower than specified are permissible.

Longitudinal attenuation:	a = 0.72
$a \cdot \sqrt{f} + b \cdot f + c$	b = 0.0021
where f is frequency in MHz	c = 0.7

Attenuation at	Nominal	Attenuation at	Nominal
5 MHz:	1.7 dB/100m	1000 MHz:	26.1 dB/100m
50 MHz:	5.6 dB/100m	1350 MHz:	30.7 dB/100m
100 MHz:	7.9 dB/100m	1600 MHz:	33.6 dB/100m
200 MHz:	11.3 dB/100m	1750 MHz:	35.3 dB/100m
400 MHz:	16.2 dB/100m	2150 MHz:	39.4 dB/100m
600 MHz:	20.0 dB/100m	2400 MHz:	41.9 dB/100m
800 MHz:	23.2 dB/100m	3000 MHz:	45.9 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.