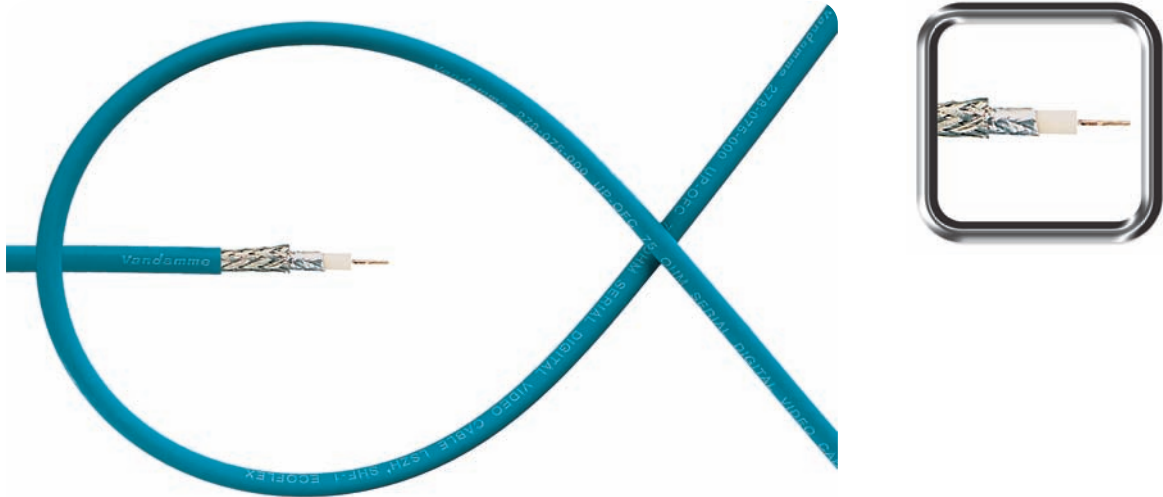




cable

31 SDI Vision Ecoflex LSZH ST 4.5



The SDI Vision range of 75 Ohm precision coaxial cables comprises a Low Smoke Zero Halogen jacketed single coax and 6 way LSZH jacketed multicore. As with the Van Damme HD vision range close attention has been paid to their electrical characteristics and tolerances to ensure trouble free performance with SMPTE 259M SDI signals as well as analogue video. These cables can also be used for shorter distance transmission of 2.97 Gb/s HD-SDI - please see the transmission length guidelines.

Applications

- Transmission of SDI and analogue video signals
- Short runs of 2.97 Gb/s HD-SDI
- 6 way multicore ideal for multiple SDI runs and/or RGBHV + composite analogue video
- Installation in public buildings, schools and colleges, government premises and marine vessels

Application notes

- Use of precision 75 Ohm components throughout any signal chain is imperative
- Jacket material specified as the thermoplastic polymer SHF-1; compliant with IEC 60092 Electrical Installations in ships pt. 359 - Sheathing materials for shipboard power and communication cables
- Fully tested and compliant with the following IEC standards (see glossary for full description)
- IEC 60332.1 Fire retardancy of a single cable
- IEC 60754.1 Amount of Halogen Gas Emissions
- IEC 60754.2 Degree of acidity of released gases
- IEC 61034.2 Measurement of smoke density

Transmission length guidelines

These transmission lengths have been calculated throughout to a maximum attenuation of -30dB at the frequency corresponding to half of the actual signal data rate for SMPTE 259 and -20dB for SMPTE 292. SMPTE and others advise that 90% of this cable length introduces an appropriate safety factor- the chart below includes an 80% safety factor as jitter and other factors can increase dramatically in the last 20% of a cable run.

SDI vision series

	SMPTE 259				SMPTE 292	SMPTE 424
Data rate (clock)	143Mb/s	177Mb/s	270Mb/s	360Mb/s	1.485Gb/s	2.97Gb/s
½ Clock Rate	72MHz	89MHz	135MHz	180MHz	743MHz	1485MHz
Recommended transmission length	264m	237m	196m	172m	54m	36m

Mechanical specification

Conductor	Material	Bare ultra pure oxygen free copper
	Stranding	1 x 0.60mm
Dielectric	Material	Foamed polyethylene
	Average thickness	1.10mm
	Diameter	2.80mm ±0.05
Screen 1	Type	≥35µm Aluminium/polyester foil 125% coverage
Screen 2	Material	Tinned bare ultra pure oxygen free copper
	Coverage	90%
	Dimension	16x5x0.16mm
Overall Jacket	Material	SHF-1 LSZH polymer Water blue RAL 5021
	Average thickness	0.40mm
	Overall diameter	4.50mm ± 0.15

6 way multicore Overall Jacket

Overall jacket	Material	SHF-1 LSZH polymer
	Colour	Water blue RAL 5021
	Overall diameter	15.60mm ±0.30
Bend radius		15 x overall diameter

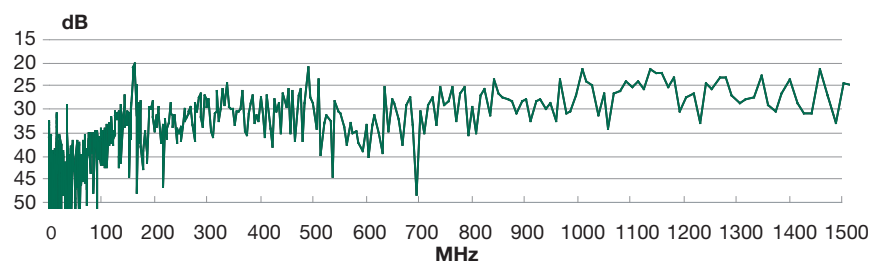
Physical properties unaged

Jacket (at 60°C)	Tensile strength	>9 N/mm ²
	Elongation	>125%
	Heat shock test	150 °C x 1 hour – no cracks
Halogen Emissions	≤0.30% Halogen acid gases according to IEC 60754-2	

Electrical characteristics

Resistance	Conductor	<69 Ohm/Km		
	Shield	<10 Ohm/Km		
	Insulation	>5000 M Ohm/Km		
Voltage test	1500V DC 1 minute OK			
Capacitance	56 pF/m			
Velocity of propagation	80%			
Impedance at 10MHz	75 Ohms ±1.5			
Attenuation	5 MHz	2.84 dB/100m	200 MHz	14.70 dB/100m
	10 MHz	3.92 dB/100m	270 MHz	17.15 dB/100m
	100 MHz	10.72 dB/100m	400 MHz	21.12 dB/100m
	135 MHz	12.24 dB/100m	743 MHz	29.77 dB/100m
	180 MHz	13.93 dB/100m	1485 MHz	44.05 dB/100m

Structural return loss



Characteristics & description

Stock code	Description	RAL code	Weight Kg/km	Reel lengths
278-075-000	Van Damme SDI Vision single coax LSZH Ecoflex	4.50mm	31	500m
278-075-006	Van Damme SDI Vision 6 way multicore coax LSZH Ecoflex	15.60mm	300	500m