

Speedfoam[®]

Low loss flexible
communications cable



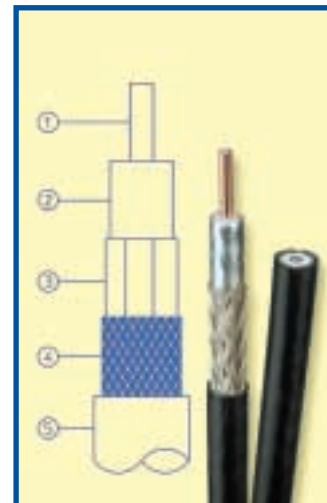
Speedfoam[®] Low-loss Flexible Communications Cable

Speedfoam can be used in most applications where high performance coaxial cables are used.

Engineering Data

Habia Ref	Material	Speedfoam 300		Speedfoam 400		Speedfoam 500		Speedfoam 700		Speedfoam 900	
		Diameter (mm)	(in)	Diameter (mm)	(in)	Diameter (mm)	(in)	Diameter (mm)	(in)	Diameter (mm)	(in)
① Conductor	Solid bare copper or Solid copper covered aluminium	1.12	0.044	1.42	0.056	1.78	0.070	2.75	0.108	3.61	0.142
② Dielectric	Foamed polyethylene	2.95	0.116	3.81	0.150	4.83	0.190	7.24	0.285	9.40	0.370
③ Outer Conductor (a)	Aluminium/Mylar tape, bonded to dielectric	3.07	0.121	3.94	0.155	4.98	0.196	7.40	0.291	9.55	0.376
④ Outer Conductor (b)	Braid of tin plated copper	3.66	0.144	4.52	0.178	5.72	0.225	8.10	0.320	10.30	0.405
⑤ Jacket	Low smoke, zero halogen, black	4.95	0.195	6.10	0.240	7.62	0.300	10.30	0.406	12.70	0.500

Note: all figures are nominal unless otherwise specified



Introduction

Over a number of years, Habia Cable has developed, together with our worldwide telecommunications customers, a complete range of RF cables to meet their demands in an industry where product innovation is moving ahead at a tremendous pace. To further enhance these products we have developed our Speedfoam range of cables.

The Speedfoam range consists of low loss communications cables specifically designed to meet the increasing demands of the Telecommunications Industry. Speedfoam is a halogen free series of cables using highly foamed, closed-cell PE dielectric with a screen of tightly bonded, overlapped aluminium tape and an overall braid. This results in cables with excellent shielding properties and phase stability.

The jacket is of flame retardant PE with resulting cables being totally halogen-free, low-smoke and flame retardant to IEC 60332-3C. The cables have a lower loss than their equivalent sized, solid dielectric cables and at a lower cost.

Features & Benefits

- Outstanding shielding properties
- Good phase stability
- Up to 2.5 GHz operating frequency
- Good flexibility
- Improved attenuation
- Excellent against cross-talk
- Halogen-free, low-smoke & flame retardant
- Light weight
- UV sunlight resistance 720h, passes UL 1581

Custom Design

- Variations on our standard versions are available on request
- * Cross-linked versions to increase operating temperature
- * UL versions to meet the requirements of the US market
- * Versions with improved properties for outdoor usage with increased resistance to moisture, UV and the elements
- * Radiation tolerant version available

Typical applications

- Drop-in, jumper assemblies
- Short antenna feeders
- Internal cabinet wiring
- System interconnects
- Inter-cabinet jumper leads
- Base station external jumpers
- Satellite terminals
- Antenna applications
- In-building applications

Photographic credits:

- Cover topAllgon
- Cover BottomAllgon
- Back pageEricsson

Custom Design

- Cross-linking
- UL- standards
- Outdoor usage types
- Radiation tolerant

Connectors

Details of compatible types can be provided on request.

Cable Marking

Jackets of all cables are marked with type and date of manufacture

Websitewww.benelec.com.au
Emailinquiries@benelec.com.au
Int. Tel+61-2-9364 7000

Speedfoam[®] 300 Low-loss Flexible Communications Cable

Engineering Data

Cable Design

	Ø
	(mm)
Centre conductor	solid bare copper 1.12
Dielectric	foamed polyethylene 2.95
Outer conductor	al/mylar tape, bonded to dielectric 3.07
.....	braid of tin plated copper 3.66
.....	overall coverage 100 %
Jacket	LS0H, black 4.95
Marking.....	Habia Cable Speedfoam 300,
.....	and date of manufacture

Electrical Data

Impedance.....	50 ± 2 Ω
Capacitance80 pF/m
Velocity of signal propagation.....	.83 %
Signal delay.....	.4 ns/m
Working voltage, maximum500V
Shielding effectiveness	>90 dB
Attenuation, typical values	see graph
Power, typical values	see graph
DC resistance, inner conductor.....	17.6 Ω/km
DC resistance, outer conductor.....	16.1 Ω/km

Environmental & Mechanical

Minimum bend radius, single bend.....	13 mm
Minimum bend radius, multiple bends	50 mm
Weight.....	35 kg/km
Operating temperature.....	-40 to +80 °C
Flame resistance, passes	IEC 60332-3C, IEEE 383
Smoke, passes	IEC 61034-2
Halogens, passes	IEC 60754-2

Connectors

Information can be provided on request.

Additional Information

Speedfoam 300 UL 1375

UL version in accordance with AWM style 1375.	
Specification	As Speedfoam 300
Working voltage	30 V
Operating temperature	+60 °C
Flame rating	UL 1581 VW-1
Our file no	E75929

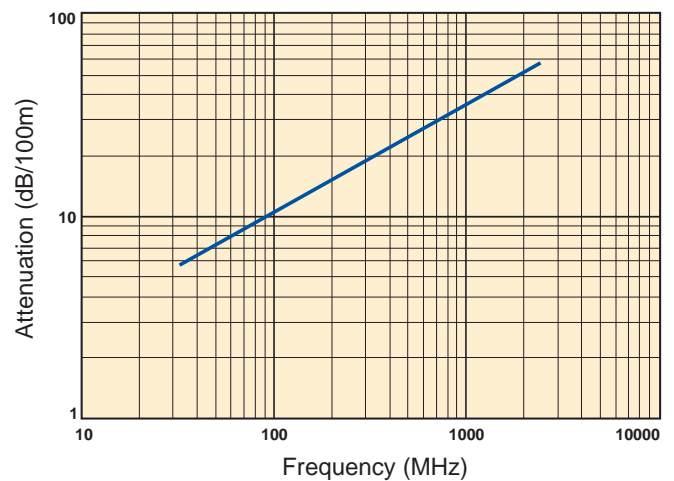
Speedfoam 300 XL

Cross-linked version	
Specification	As Speedfoam 300
Operating temperature	+100 °C

Note: all figures are nominal unless otherwise specified

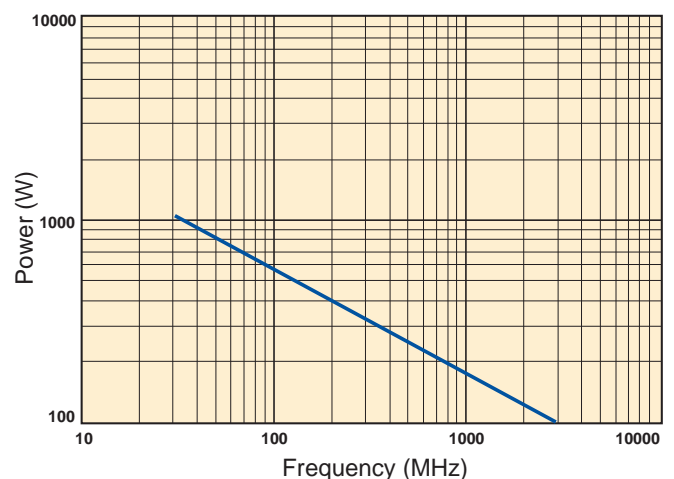
Cable Attenuation

Nominal values @ +25°C ambient temperature



Average Power

Ambient temperature 40°C at sea level & VSWR1.0



Custom Design

A radiation resistant version can be manufactured with a copper foil (10⁶ Gy)
Different types of jacket available
Please ask for details

All Speedfoam types are Low-Smoke, Zero-Halogen

Website.....www.benelec.com.au
Email.....inquiries@benelec.com.au
International Telephone.....+61-2-9364 7000

Speedfoam[®] 400

Low-loss Flexible Communications Cable

Engineering Data

Cable Design

	Ø (mm)
Centre conductor	solid bare copper 1.42
Dielectric	foamed polyethylene 3.81
Outer conductor	al/mylar tape, bonded to dielectric 3.94
.....	braid of tin plated copper 4.52
.....	overall coverage 100%
Jacket	LSOH, black 6.10
Marking.....	Habia Cable Speedfoam 400,and date of manufacture

Electrical Data

Impedance	50 ± 2 Ω
Capacitance	79 pF/m
Velocity of signal propagation.....	84 %
Signal delay.....	4 ns/m
Working voltage, maximum	500V
Shielding effectiveness.....	>90 dB
Attenuation, typical values	see graph
Power, typical values	see graph
DC resistance, inner conductor.....	10.5 Ω/km
DC resistance, outer conductor.....	12.8 Ω/km

Environmental & Mechanical

Minimum bend radius, single bend.....	20 mm
Minimum bend radius, multiple bends	60 mm
Weight	59 kg/km
Operating temperature.....	-40 to +80 °C
Flame resistance, passes.....	IEC 60332-3C, IEEE 383
Smoke, passes	IEC 61034-2
Halogens, passes	IEC 60754-2

Connectors

Information can be provided on request.

Additional Information

Speedfoam 400 UL 1375

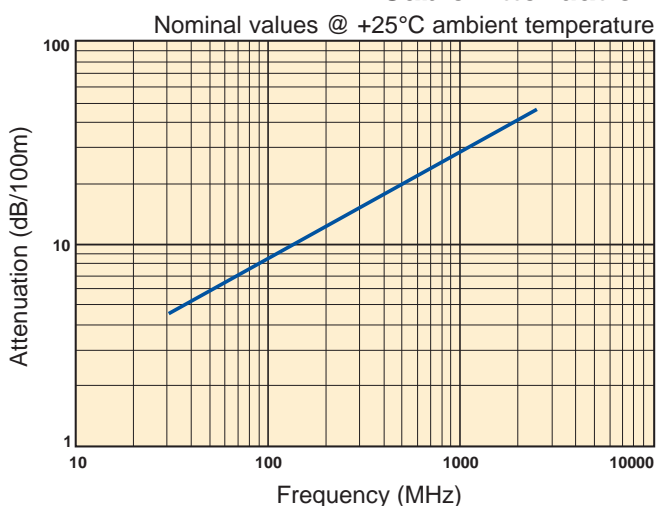
UL version in accordance with AWM style 1375.	
Specification	As Speedfoam 400
Working voltage	30 V
Operating temperature	+60°C
Flame rating	UL 1581 VW-1
Our file no	E75929

Speedfoam 400 XL

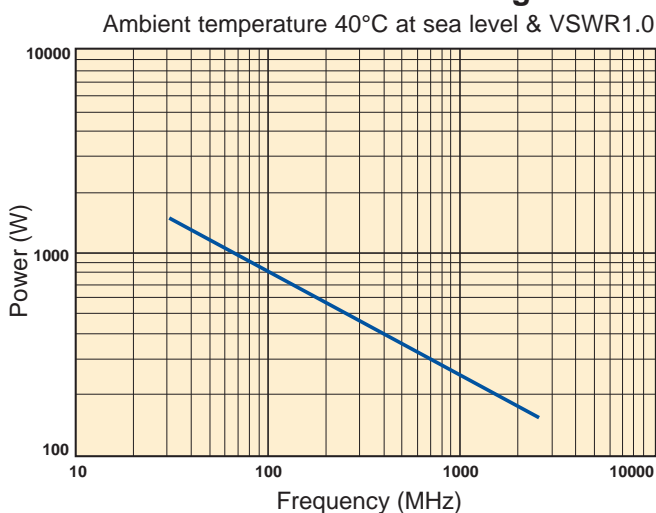
Cross-linked version	
Specification	As Speedfoam 400
Operating temperature	+100°C

Note: all figures are nominal unless otherwise specified

Cable Attenuation



Average Power



Custom Design

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Website www.benelec.com.au
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Telephone +61-2-9364 7000

Speedfoam[®] 500 Low-loss Flexible Communications Cable

Engineering Data

Cable Design

	\varnothing
	(mm)
Centre conductor.....solid bare copper	1.78
Dielectric.....foamed polyethylene	4.83
Outer conductor.....al/mylar tape, bonded to dielectri	4.98
.....braid of tin plated copper	5.72
.....overall coverage 100%	
Jacket.....LSOH, black	7.62
Marking.....Habia Cable Speedfoam 500,	
.....and date of manufacture	

Electrical Data

Impedance.....	50 \pm 2 Ω
Capacitance.....	79 pF/m
Velocity of signal propagation.....	85 %
Signal delay.....	4 ns/m
Working voltage, maximum.....	500V
Shielding effectiveness.....	>90 dB
Attenuation, typical values.....	see graph
Power, typical values.....	see graph
DC resistance, inner conductor.....	7.0 Ω /km
DC resistance, outer conductor.....	7.5 Ω /km

Environmental & Mechanical

Minimum bend radius, single bend.....	23 mm
Minimum bend radius, multiple bends.....	75 mm
Weight.....	.94 kg/km
Operating temperature.....	-40 to +80 °C
Flame resistance, passes.....	IEC 60332-3C, IEEE 383
Smoke, passes.....	IEC 61034-2
Halogens, passes.....	IEC 60754-2

Connectors

Information can be provided on request.

Additional Information

Speedfoam 500 UL 1375

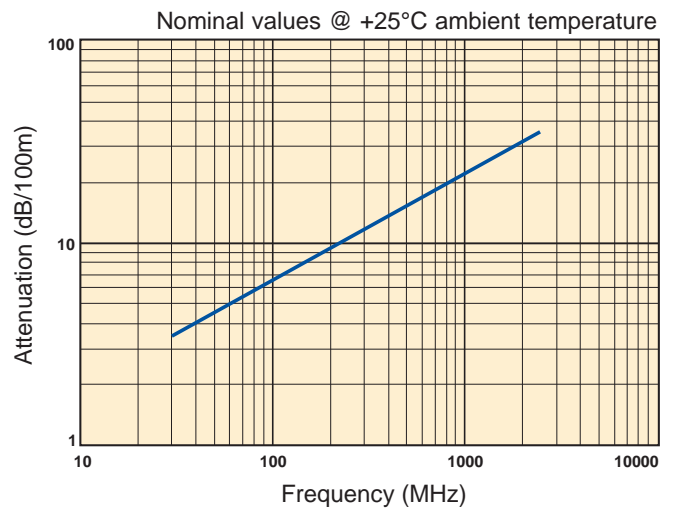
UL version in accordance with AWM style 1375.	
Specification.....	As Speedfoam 500
Working voltage.....	30 V
Operating temperature.....	+60°C
Flame rating.....	UL 1581 VW-1
Our file no.....	E75929

Speedfoam 500 XL

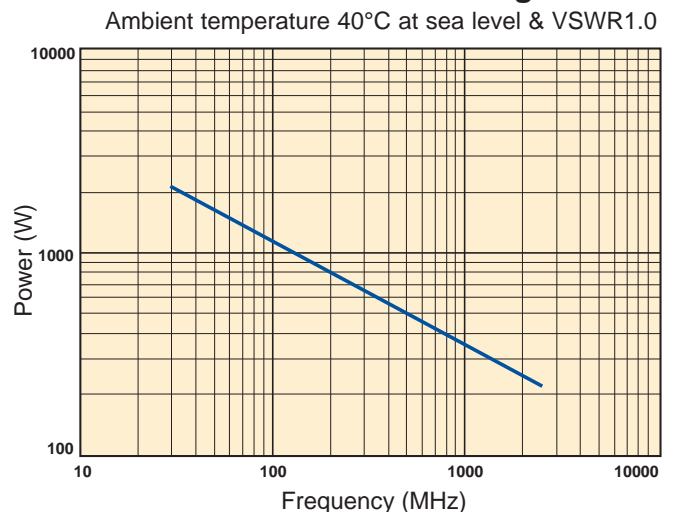
Cross-linked version	
Specification.....	As Speedfoam 500
Operating temperature.....	+100°C

Note: all figures are nominal unless otherwise specified

Cable Attenuation



Average Power



Custom Design

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Speedfoam[®] 700

Low-loss Flexible Communications Cable

Engineering Data

Cable Design

	Ø (mm)
Centre conductor.....solid copper covered aluminium	2.75
Dielectric foamed polyethylene	7.24
Outer conductoral/mylar tape, bonded to dielectric	7.40
.....braid of tin plated copper	8.10
.....overall coverage 100%	
JacketLSOH, black	10.30
MarkingHabia Cable Speedfoam 700,and date of manufacture	

Electrical Data

Impedance	50 ± 2 Ω
Capacitance79 pF/m
Velocity of signal propagation.....	.84 %
Signal delay.....	.4 ns/m
Working voltage, maximum	500V
Shielding effectiveness.....	>90 dB
Attenuation, typical values	see graph
Power, typical values	see graph
DC resistance, inner conductor.....	4.5 Ω/km
DC resistance, outer conductor.....	5.6 Ω/km

Environmental & Mechanical

Minimum bend radius, single bend.....	25 mm
Minimum bend radius, multiple bends	100 mm
Weight	94 kg/km
Operating temperature.....	-40 to +80 °C
Flame resistance, passes.....	IEC 60332-3C, IEEE 383
Smoke, passes	IEC 61034-2
Halogens, passes	IEC 60754-2

Connectors

Information can be provided on request.

Additional Information

Speedfoam 700 UL 1375

UL version in accordance with AWM style 1375.	
Specification	As Speedfoam 700
Working voltage	30 V
Operating temperature	+60 °C
Flame rating	UL 1581 VW-1
Our file no	E75929

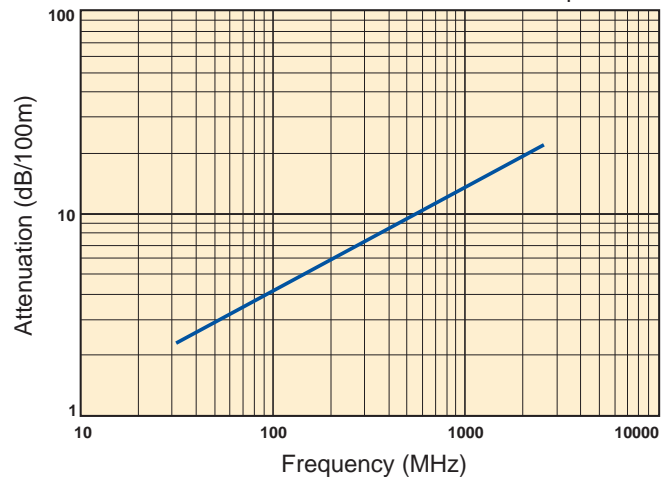
Speedfoam 700 XL

Cross-linked version	
Specification	As Speedfoam 700
Operating temperature.....	+100 °C

Note: all figures are nominal unless otherwise specified

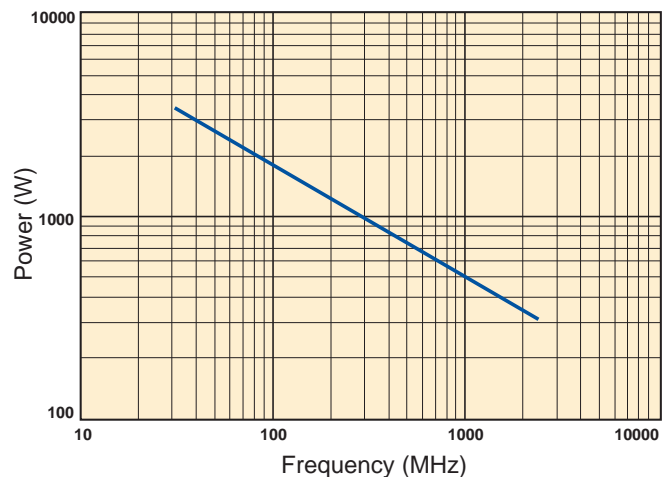
Cable Attenuation

Nominal values @ +25°C ambient temperature



Average Power

Ambient temperature 40°C at sea level & VSWR1.0



Custom Design

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Speedfoam[®] 900 Low-loss Flexible Communications Cable

Engineering Data

Cable Design

	Ø (mm)
Centre conductor	solid copper covered aluminium 3.61
Dielectric	foamed polyethylene 9.40
Outer conductor.....	al/mylar tape, bonded to dielectric 9.55
.....	braid of tin plated copper 10.30
.....	overall coverage 100%
Jacket.....	LS0H, black 12.70
Marking.....	Habia Cable Speedfoam 900,anddate of manufacture

Electrical Data

Impedance	50 ± 2 Ω
Capacitance79 pF/m
Velocity of signal propagation.....	.85 %
Signal delay.....	.4 ns/m
Working voltage, maximum	500V
Shielding effectiveness.....	>90 dB
Attenuation, typical values	see graph
Power, typical values	see graph
DC resistance, inner conductor.....	.2.7 Ω/km
DC resistance, outer conductor.....	.4.2 Ω/km

Environmental & Mechanical

Minimum bend radius, single bend.....	32 mm
Minimum bend radius, multiple bends.....	130 mm
Weight	150 kg/km
Operating temperature.....	-40 to +80 °C
Flame resistance, passes.....	IEC 60332-3C, IEEE 383
Smoke, passes	IEC 61034-2
Halogens, passes	IEC 60754-2

Connectors

Information can be provided on request.

Additional Information

Speedfoam 900 UL 1375

UL version in accordance with AWM style 1375.	
Specification	As Speedfoam 900
Working voltage30 V
Operating temperature.....	+60 °C
Flame rating	UL 1581 VW-1
Our file noE75929

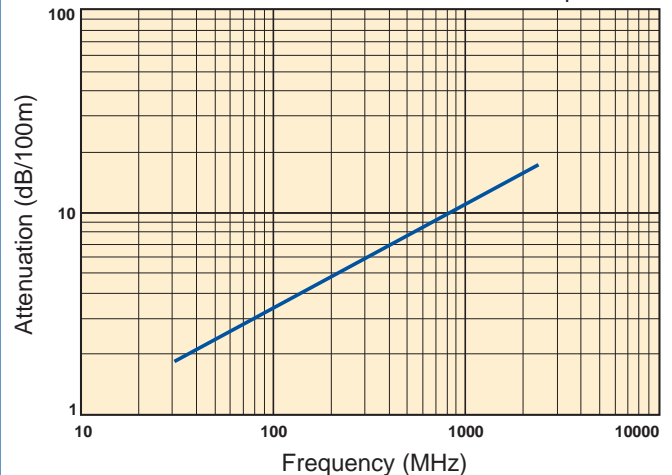
Speedfoam 900 XL

Cross-linked version	
Specification	As Speedfoam 900
Operating temperature.....	+100 °C

Note: all figures are nominal unless otherwise specified

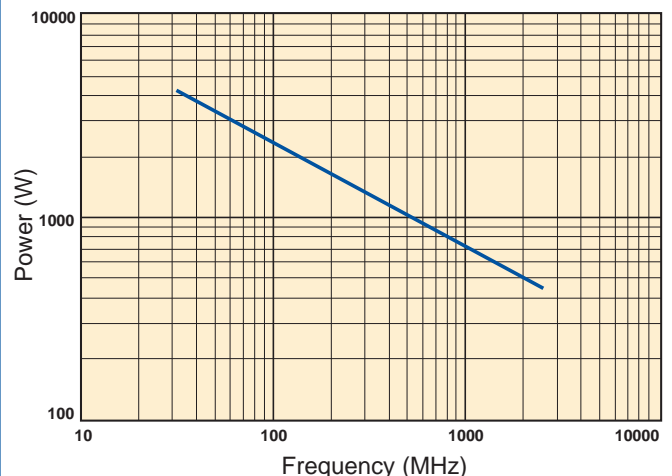
Cable Attenuation

Nominal values @ +25°C ambient temperature



Average Power

Ambient temperature 40°C at sea level & VSWR1.0



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