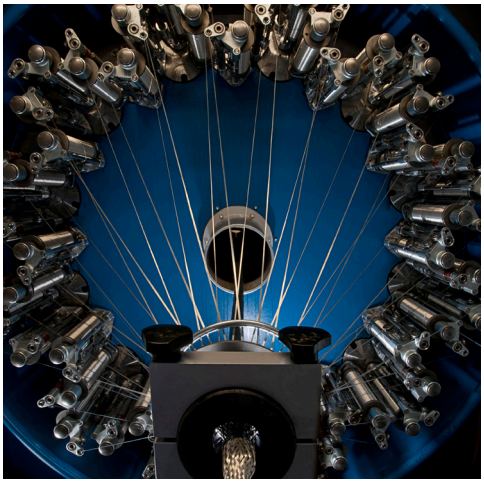
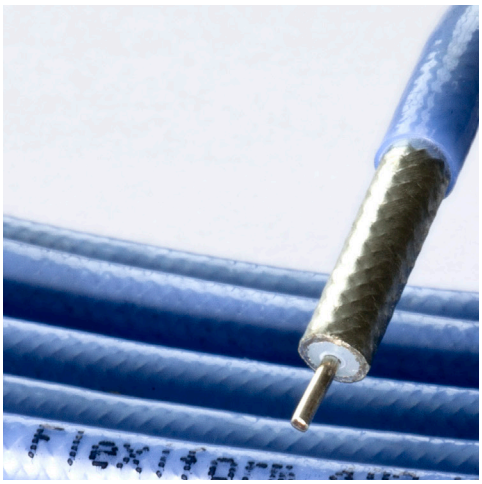
Habia Cable





Flexiform

Re-formable coaxial cables

Contents

All data within this publication indicates nominal values in millimetres (mm) unless otherwise stated.
DISCLAIMER: Information is indicative and cannot be considered a binding representation or warranty for products and their use. Valid at the time of publication, it is subject to change without notice.

Reformable coaxial cables

The Flexiform coaxial cable range from Habia Cable provides a reformable alternative to the traditional semi-rigid (copper tube) coaxial cables for high frequency use.

Able to operate up to 18 GHz, Flexiform is ideal for microwave applications and has the ability to be stripped and formed into position without the need for any specialist tools. Handling is similar to any standard coax cable which means that traditional cut-and-strip machines can be used.

Flexiform

The original, premium spec. re-formable coaxial cable, the Flexiform range was created to meet the sizes:

- 0.250” = Flexiform 401
- 0.141” = Flexiform 402
- 0.086” = Flexiform 405

As the range proved popular, it was expanded to include the intermediate sizes:

- 0.171” = Flexiform 380
- 0.110” = Flexiform 220

The 402 and 405 sizes use Silver Plated Copper Covered Steel (SCCS) conductors in order to provide a stronger central core but are also available with Silver Plated Copper (SPC) conductors to provide a non-magnetic option as this can improve both passive intermodulation and flexibility. These types are referred to with the suffix ‘NM’.

The remaining sizes: 401, 220 and 380 are only available with non-magnetic SPC conductors even though their descriptions don’t include the ‘NM’ reference.

As the flexiform range has evolved and expanded, so a range of suffix letters has been introduced denoting additional properties.

F = Foil

With a foil as part of the screen, variants like Flexiform LXF and SLXF offer considerably improved electrical performance with attenuation in the region of 20% better than the standard Flexiform.

L = Low loss

These variants use a profiled dielectric to reduce attenuation by approximately 7% compared to original Flexiform. This gives a phase stable, high performance coaxial cable with little dimensional trade off and no additional cost.

M = Miniature

Miniature versions of the Flexiform apply the same principles of profiling that are used in the L version, but with the sole aim of reducing the overall diameter of the dielectric as far as possible whilst still offering a quality product.

S = Small

The ‘S’ or ‘Small’ Flexiforms such as the SL and SLX types use the technology of Flexiform L but instead of reducing the attenuation it is used to reduce the size, providing the electrical performance of a larger coaxial within a smaller space envelope.

X = Standard tolerances

Much the same as the original premium spec. product, variants with the suffix ‘X’ are permitted slightly wider tolerances, which in turn improves efficiency in production and ultimately a reduced cost to the customer.

As indicated above, most of these properties are combined with one another to produce the best cable for the application. For example: Flexiform SLXF (Small, Low loss, Standard tolerances with an additional Foil screen).

All Flexiform designs can be modified on request for alternative conductors, dimensions and colours and sheath materials.

Flexiform

Premium, re-formable coaxial cables
Intended for use primarily as a transmission line in high frequency applications

50 Ω | -65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	PTFE	Tinned braid	N/A					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 380	Solid	1.20	**3.80**	**4.50**	-	57	2,400	94	20	**3100038000**
Flexiform 401	Solid	1.67	**5.31**	**6.35**	-	110	3,600	94	40	**3100040100**
Flexiform 402 NM	Solid	0.94	**2.95**	**3.58**	-	41	2,000	94	10	**3100040203**
Flexiform 405 NM	Solid	0.54	**1.68**	**2.15**	-	17	1,000	94	6	**3100040503**
Flexiform	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SCCS	PTFE	Tinned braid	N/A					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402	Solid	0.94	**2.95**	**3.58**	-	41	2,000	94	10	**3100040200**
Flexiform 405	Solid	0.53	**1.65**	**2.15**	-	16	1,000	94	6	**3100040500**

Electrical data

Attenuation (dB/100m at 20°C)				
Frequency (MHz)	Flexiform 380	Flexiform 401	Flexiform 402	Flexiform 405
400	20	15	25	43
1,000	32	25	41	70
2,000	46	38	60	102
3,000	59	49	77	131
4,000	70	58	90	153
5,000	79	66	102	172
6,000	88	74	113	190
10,000	120	101	152	249
18,000	172	147	215	346

Power (Watts at 40°C)				
Frequency (MHz)	Flexiform 380	Flexiform 401	Flexiform 402	Flexiform 405
400	750	1,769	686	253
1,000	474	1,056	419	157
2,000	330	728	291	110
3,000	269	581	235	89
4,000	233	503	203	77
5,000	208	450	182	69
6,000	190	411	166	63
10,000	147	294	122	47
18,000	110	190	83	33

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	White	
Outer sheath	None	Habia Cable - Description - Article No. - Year-Week - Batchcode

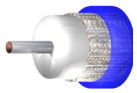
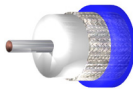
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 71%

Flexiform FJ

Premium, re-formable, high temperature coaxial cables
Intended for use primarily as a transmission line in high frequency applications

50 Ω | -65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	PTFE	Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 220 FJ	Solid	0.71	**2.20**	2.80	**3.20**	35	1,600	94	10	**3100022001**
Flexiform 380 FJ	Solid	1.20	**3.80**	4.50	**5.05**	70	2,400	94	20	**3100038001**
Flexiform 401 FJ	Solid	1.67	**5.31**	6.35	**6.90**	130	3,600	94	40	**3100040101**
Flexiform 402 NM FJ	Solid	0.94	**2.95**	3.58	**4.14**	48	2,000	94	10	**3100040204**
Flexiform 405 NM FJ	Solid	0.54	**1.68**	2.15	**2.50**	18	1,000	94	6	**3100040504**
Flexiform FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SCCS	PTFE	Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402 FJ	Solid	0.94	**2.95**	3.58	**4.14**	48	2,000	94	10	**3100040201**
Flexiform 405 FJ	Solid	0.53	**1.65**	2.15	**2.50**	22	1,000	94	6	**3100040501**

Electrical data

Attenuation (dB/100m at 20°C)					
Frequency (MHz)	Flexiform 220 FJ	Flexiform 380 FJ	Flexiform 401 FJ	Flexiform 402 FJ	Flexiform 405 FJ
400	32	20	15	25	43
1,000	52	32	25	41	70
2,000	80	46	38	60	102
3,000	99	59	49	77	131
4,000	116	70	58	90	153
5,000	128	79	66	102	172
6,000	142	88	74	113	190
10,000	190	120	101	152	249
18,000	270	172	147	215	346

Power (Watts at 40°C)					
Frequency (MHz)	Flexiform 220 FJ	Flexiform 380 FJ	Flexiform 401 FJ	Flexiform 402 FJ	Flexiform 405 FJ
400	320	750	1,769	686	253
1,000	199	474	1,056	419	157
2,000	135	330	728	291	110
3,000	110	269	581	235	89
4,000	95	233	503	203	77
5,000	75	208	450	182	69
6,000	68	190	411	166	63
10,000	55	147	294	122	47
18,000	40	110	190	83	33

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue-transparent	Habia Cable - Description - Article No. - Year-Week - Batchcode

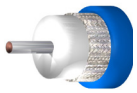
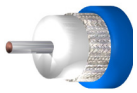
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 71%

Flexiform HFJ

Premium, re-formable coaxial cables, LSZH sheath
Intended for use primarily as a transmission line in high frequency applications

50 Ω -40°C to +80°C

Description	Construction					Properties				Article Number
Flexiform HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	PTFE	Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 380 HFJ	Solid	1.20	**3.80**	4.50	**5.50**	69	2,400	94	20	**3100038002**
Flexiform 401 HFJ	Solid	1.67	**5.31**	6.35	**7.60**	140	3,600	94	40	**3100040102**
Flexiform 402 NM HFJ	Solid	0.94	**2.95**	3.58	**4.60**	53	2,000	94	10	**3100040205**
Flexiform 405 NM HFJ	Solid	0.54	**1.68**	2.15	**3.20**	23	1,000	94	6	**3100040505**
Flexiform HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SCCS	PTFE	Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402 HFJ	Solid	0.94	**2.95**	3.58	**4.60**	51	2,000	94	10	**3100040202**
Flexiform 405 HFJ	Solid	0.53	**1.65**	2.15	**3.20**	23	1,000	94	6	**3100040502**

Electrical data

Attenuation (dB/100m at 20°C)				
Frequency (MHz)	Flexiform 380 HFJ	Flexiform 401 HFJ	Flexiform 402 HFJ	Flexiform 405 HFJ
400	20	15	25	43
1,000	32	25	41	70
2,000	46	38	60	102
3,000	59	49	77	131
4,000	70	58	90	153
5,000	79	66	102	172
6,000	88	74	113	190
10,000	120	101	152	249
18,000	172	147	215	346

Power (Watts at 40°C)				
Frequency (MHz)	Flexiform 380 HFJ	Flexiform 401 HFJ	Flexiform 402 HFJ	Flexiform 405 HFJ
400	346	445	176	75
1,000	219	270	111	47
2,000	155	182	79	34
3,000	127	136	65	28
4,000	110	117	56	25
5,000	98	105	50	22
6,000	89	96	46	20
10,000	69	74	35	16
18,000	52	66	26	12

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue	Habia Cable - Description - Article No. - Year-Week - Batchcode

Characteristics & key properties

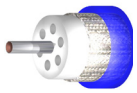
CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 71%

Flexiform L FJ

Premium, low loss, re-formable high temperature coaxial cables
Intended for use primarily as a transmission line in high frequency applications

50 Ω

-65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform L FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 401 L FJ	Solid	1.88	**5.31**	6.35	**6.90**	124	1,800	84	40	**3140040101**
Flexiform 402 L FJ	Solid	1.03	**2.95**	3.58	**4.14**	46	1,000	85	10	**3140040201**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 401 L FJ	Flexiform 402 L FJ
400	13	23
1,000	22	38
2,000	33	55
3,000	44	71
4,000	52	82
5,000	58	92
6,000	64	101

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 401 L FJ	Flexiform 402 L FJ
400	2,000	740
1,000	1,190	459
2,000	820	318
3,000	658	250
4,000	570	217
5,000	510	194
6,000	466	177

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue-transparent	Habia Cable - Description - Article No. - Year-Week - Batchcode

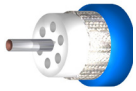
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	401 L FJ Velocity of propagation 79%	402 L FJ Velocity of propagation 78%

Flexiform L HFJ

Premium, low loss, re-formable coaxial cables, LSZH sheath
Intended for use primarily as a transmission line in high frequency applications

50 Ω -40°C to +80°C

Description	Construction					Properties				Article Number
Flexiform L HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 401 L HFJ	Solid	1.88	**5.31**	6.35	**7.60**	134	1,800	84	40	**3140040102**
Flexiform 402 L HFJ	Solid	1.03	**2.95**	3.58	**4.60**	48	1,000	85	10	**3140040205**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 401 L HFJ	Flexiform 402 L HFJ
400	13	23
1,000	22	38
2,000	33	55
3,000	44	71
4,000	52	82
5,000	58	92
6,000	64	101

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 401 L HFJ	Flexiform 402 L HFJ
400	474	258
1,000	300	163
2,000	212	115
3,000	173	94
4,000	150	82
5,000	134	73
6,000	122	67

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue	Habia Cable - Description - Article No. - Year-Week - Batchcode

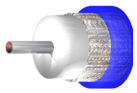
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	401 L HFJ Velocity of propagation 79%	402 L HFJ Velocity of propagation 78%

Flexiform LX FJ

Standard, low loss, re-formable high temperature coaxial cables
Intended for use primarily as a transmission line in high frequency applications

50 Ω -65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform LX FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 401 LX FJ	Solid	1.88	**5.31**	6.15	**6.70**	127	1,800	84	40	**3140040105**
Flexiform 402 LX FJ	Solid	1.05	**3.00**	3.56	**4.10**	47	1,000	86	10	**700041779**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 401 LX FJ	Flexiform 402 LX FJ
400	13	22
1,000	22	37
2,000	33	53
3,000	44	66
4,000	52	77
5,000	58	86
6,000	64	94

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 401 LX FJ	Flexiform 402 LX FJ
400	2,000	680
1,000	1,190	413
2,000	820	287
3,000	658	232
4,000	570	200
5,000	510	178
6,000	466	163

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue-transparent	Habia Cable - Description - Article No. - Year-Week - Batchcode

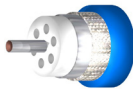
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 78%

Flexiform LX HFJ

Standard, low loss, re-formable coaxial cables, LSZH sheath
Intended for use primarily as a transmission line in high frequency applications

50 Ω -40°C to +80°C

Description	Construction					Properties				Article Number
Flexiform LX HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 401 LX HFJ	Solid	1.88	**5.31**	6.15	**7.10**	130	1,800	84	40	**3140040104**
Flexiform LX HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402 LX HFJ	Solid	1.05	**3.00**	3.56	**4.30**	48	1,000	86	10	**700041105**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 401 LX HFJ	Flexiform 402 LX HFJ
400	13	22
1,000	22	37
2,000	33	53
3,000	44	66
4,000	52	77
5,000	58	86
6,000	64	94

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 401 LX HFJ	Flexiform 402 LX HFJ
400	474	189
1,000	300	114
2,000	212	79
3,000	173	64
4,000	150	55
5,000	134	49
6,000	122	44

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue	Habia Cable - Description - Article No. - Year-Week - Batchcode
Outer sheath: 401 LX HFJ	White	Habia Cable - Description - Article No. - Year-Week - Batchcode

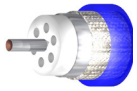
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 78%

Flexiform LXF FJ

Standard, low loss, re-formable high temperature coaxial cables
Intended for use primarily as a transmission line in high frequency applications

50 Ω -65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform LXF FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Foil & Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 380 LXF FJ	Solid	1.37	**3.85**	Foil: 3.92 Braid: 4.40	**5.05**	65	1,200	83	20	**3140038008**
Flexiform 402 LXF FJ	Solid	1.05	**3.00**	Foil: 3.08 Braid: 3.58	**4.14**	45	1,000	86	10	**3100040256**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 380 LXF FJ	Flexiform 402 LXF FJ
400	15	20
1,000	24	32
2,000	35	46
3,000	45	57
4,000	55	68
5,000	65	77
6,000	70	85

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 380 LXF FJ	Flexiform 402 LXF FJ
400	1,245	750
1,000	765	455
2,000	525	315
3,000	420	255
4,000	355	220
5,000	310	195
6,000	280	180

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue-transparent	Habia Cable - Description - Article No. - Year-Week - Batchcode

Characteristics & key properties

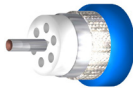
CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	380 LXF FJ Velocity of propagation 80%	402 LXF FJ Velocity of propagation 78%

Flexiform LXF HFJ

Standard, low loss, re-formable coaxial cables, LSZH sheath
Intended for use primarily as a transmission line in high frequency applications

50 Ω

-40°C to +80°C

Description	Construction					Properties				Article Number
Flexiform LXF HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Foil & Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 380 LXF HFJ	Solid	1.37	**3.85**	Foil: 3.92 Braid: 4.40	**5.40**	63	1,200	83	20	**3140038006**
Flexiform 402 LXF HFJ	Solid	1.05	**3.00**	Foil: 3.08 Braid: 3.58	**4.50**	48	1,000	86	10	**3100040257**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 380 LXF HFJ	Flexiform 402 LXF HFJ
400	15	20
1,000	24	32
2,000	35	46
3,000	45	57
4,000	55	68
5,000	65	77
6,000	70	85

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 380 LXF HFJ	Flexiform 402 LXF HFJ
400	350	245
1,000	215	150
2,000	145	105
3,000	115	85
4,000	100	70
5,000	85	65
6,000	75	60

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue	Habia Cable - Description - Article No. - Year-Week - Batchcode

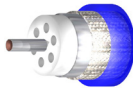
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	380 LXF HFJ Velocity of propagation 80%	402 LXF HFJ Velocity of propagation 78%

Flexiform MLF FJ

Miniature, low loss, re-formable high temperature coaxial cables
Intended for use primarily as a transmission line in high frequency applications

50 Ω -65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform MLF FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Foil & Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402 MLF FJ	Solid	0.81	**2.31**	Foil: 2.40 Braid: 2.90	**3.40**	34	800	86	10	**3100040265**

Electrical data

Attenuation (dB/100m at 20°C)	
Frequency (MHz)	Flexiform 402 MLF FJ
400	25
1,000	41
2,000	60
3,000	77
4,000	90
5,000	102
6,000	113

Power (Watts at 40°C)	
Frequency (MHz)	Flexiform 402 MLF HFJ
400	565
1,000	345
2,000	240
3,000	195
4,000	170
5,000	150
6,000	135

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue-transparent	Habia Cable - Description - Article No. - Year-Week - Batchcode

Characteristics & key properties

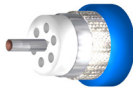
CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 77%

Flexiform MLF HFJ

Miniature, low loss, re-formable coaxial cables, LSZH sheath
Intended for use primarily as a transmission line in high frequency applications

50 Ω

-40°C to +80°C

Description	Construction					Properties				Article Number
Flexiform MLF HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Foil & Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402 MLF HFJ	Solid	0.81	**2.31**	Foil: 2.40 Braid: 2.90	**3.60**	34	800	86	10	**3100040266**

Electrical data

Attenuation (dB/100m at 20°C)	
Frequency (MHz)	Flexiform 402 MLF HFJ
400	25
1,000	41
2,000	60
3,000	77
4,000	90
5,000	102
6,000	113

Power (Watts at 40°C)	
Frequency (MHz)	Flexiform 402 MLF HFJ
400	120
1,000	70
2,000	50
3,000	40
4,000	35
5,000	30
6,000	25

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue	Habia Cable - Description - Article No. - Year-Week - Batchcode

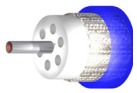
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 77%

Flexiform SL FJ

Premium, small low loss, re-formable high temperature coaxial cables
Intended for use primarily as a transmission line in high frequency applications

50 Ω -65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform SL FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402 SL FJ	Solid	0.94	**2.65**	3.28	**3.84**	40	1,000	86	8	**3140040212**

Electrical data

Attenuation (dB/100m at 20°C)	
Frequency (MHz)	Flexiform 402 SL FJ
400	25
1,000	41
2,000	60
3,000	76
4,000	88
5,000	107
6,000	118

Power (Watts at 40°C)	
Frequency (MHz)	Flexiform 402 SL FJ
400	686
1,000	434
2,000	307
3,000	251
4,000	217
5,000	194
6,000	177

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue-transparent	Habia Cable - Description - Article No. - Year-Week - Batchcode

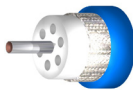
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 77.5%

Flexiform SL HFJ

Premium, small low loss, re-formable coaxial cables, LSZH sheath
Intended for use primarily as a transmission line in high frequency applications

50 Ω -40°C to +80°C

Description	Construction					Properties				Article Number
Flexiform SL HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402 SL HFJ	Solid	0.94	**2.65**	3.28	**4.00**	40	1,000	86	8	**3140040213**

Electrical data

Attenuation (dB/100m at 20°C)	
Frequency (MHz)	Flexiform 402 SL HFJ
400	25
1,000	41
2,000	60
3,000	76
4,000	88
5,000	107
6,000	118

Power (Watts at 40°C)	
Frequency (MHz)	Flexiform 402 SL HFJ
400	176
1,000	111
2,000	79
3,000	65
4,000	56
5,000	50
6,000	46

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue	Habia Cable - Description - Article No. - Year-Week - Batchcode

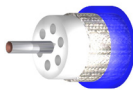
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 77.5%

Flexiform SLX FJ

Standard, small low loss, re-formable high temperature coaxial cables
Intended for use primarily as a transmission line in high frequency applications

50 Ω -65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform SLX FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 401 SLX FJ	Solid	1.67	**4.80**	5.65	**6.20**	99	1,600	87	40	**3140040107**
Flexiform 402 SLX FJ	Solid	0.94	**2.70**	3.21	**3.77**	37	1,000	86	8	**3140040214**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 401 SLX FJ	Flexiform 402 SLX FJ
400	16	25
1,000	25	41
2,000	37	60
3,000	45	76
4,000	52	88
5,000	59	107
6,000	65	118

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 401 SLX FJ	Flexiform 402 SLX FJ
400	1,550	686
1,000	930	434
2,000	671	307
3,000	645	251
4,000	581	217
5,000	520	194
6,000	475	177

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue-transparent	Habia Cable - Description - Article No. - Year-Week - Batchcode

Characteristics & key properties

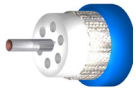
CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	401 SLX FJ Velocity of propagation 77%	402 SLX FJ Velocity of propagation 77.5%

Flexiform SLX HFJ

Standard, small low loss, re-formable coaxial cables, LSZH sheath
Intended for use primarily as a transmission line in high frequency applications

50 Ω

-40°C to +80°C

Description	Construction					Properties				Article Number
Flexiform SLX HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 401 SLX HFJ	Solid	1.67	**4.80**	5.65	**6.75**	102	1,600	87	40	**3140040108**
Flexiform 402 SLX HFJ	Solid	0.94	**2.70**	3.21	**4.00**	39	1,000	86	8	**700059184**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 401 SLX HFJ	Flexiform 402 SLX HFJ
400	16	25
1,000	25	41
2,000	37	60
3,000	45	76
4,000	52	88
5,000	59	107
6,000	65	118

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 401 SLX HFJ	Flexiform 402 SLX HFJ
400	445	176
1,000	281	111
2,000	199	79
3,000	163	65
4,000	141	56
5,000	126	50
6,000	115	46

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue	Habia Cable - Description - Article No. - Year-Week - Batchcode

Characteristics & key properties

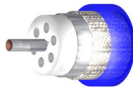
CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	401 SLX HFJ Velocity of propagation 77%	402 SLX HFJ Velocity of propagation 77.5%

Flexiform SLXF FJ

Standard, small low loss, re-formable high temperature coaxial cables with foil
Intended for use primarily as a transmission line in high frequency applications

50 Ω

-65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform SLXF FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Foil & Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402 SLXF FJ	Solid	0.94	**2.70**	Foil: 2.78 Braid: 3.28	**3.78**	40	1,000	86	10	**3140040218**

Electrical data

Attenuation (dB/100m at 20°C)	
Frequency (MHz)	Flexiform 402 SLXF FJ
400	21
1,000	35
2,000	51
3,000	65
4,000	76
5,000	87
6,000	97

Power (Watts at 40°C)	
Frequency (MHz)	Flexiform 402 SLXF FJ
400	716
1,000	442
2,000	304
3,000	243
4,000	207
5,000	183
6,000	165

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue-transparent	Habia Cable - Description - Article No. - Year-Week - Batchcode

Characteristics & key properties

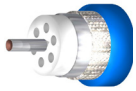
CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 77.5%

Flexiform SLXF HFJ

Standard, small low loss, re-formable coaxial cables with foil, LSZH sheath
Intended for use primarily as a transmission line in high frequency applications

50 Ω

-40°C to +80°C

Description	Construction					Properties				Article Number
Flexiform SLXF HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Foil & Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 402 SLXF HFJ	Solid	0.94	**2.70**	Foil: 2.78 Braid: 3.28	**4.28**	43	1,000	86	10	**3140040217**

Electrical data

Attenuation (dB/100m at 20°C)	
Frequency (MHz)	Flexiform 402 SLXF HFJ
400	21
1,000	35
2,000	51
3,000	65
4,000	76
5,000	87
6,000	97

Power (Watts at 40°C)	
Frequency (MHz)	Flexiform 402 SLXF HFJ
400	190
1,000	117
2,000	80
3,000	64
4,000	54
5,000	48
6,000	43

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue	Habia Cable - Description - Article No. - Year-Week - Batchcode

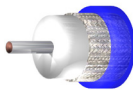
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 77.5%

Flexiform X FJ

Standard, re-formable high temperature coaxial cables
Intended for use primarily as a transmission line in high frequency applications

50 Ω -65°C to +180°C

Description	Construction					Properties				Article Number
Flexiform X FJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	FEP					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 401 X FJ	Solid	1.67	**5.31**	6.10	**6.70**	119	3,600	94	40	**40281062010**
Flexiform 402 X FJ	Solid	0.94	**3.00**	3.55	**4.10**	45	2,000	94	10	**3135040201**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 401 X FJ	Flexiform 402 X FJ
400	16	23
1,000	25	39
2,000	37	57
3,000	45	71
4,000	52	82
5,000	59	92
6,000	65	101

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 401 X FJ	Flexiform 402 X FJ
400	1,550	636
1,000	930	386
2,000	671	268
3,000	645	217
4,000	581	187
5,000	520	167
6,000	475	152

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue-transparent	Habia Cable - Description - Article No. - Year-Week - Batchcode

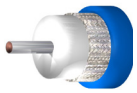
Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 71%

Flexiform X HFJ

Standard, re-formable coaxial cables, LSZH sheath
Intended for use primarily as a transmission line in high frequency applications

50 Ω -40°C to +80°C

Description	Construction					Properties				Article Number
Flexiform X HFJ	Conductor		Dielectric	Shield/s	Sheath/s	Weight	Voltage	Capacitance	Fixed MBR	
	Stranding	SPC	Profiled PTFE	Tinned braid	HFS 80 T					
		Nom Ø	Nom Ø	Nom Ø	Nom Ø	Nom g/m	V AC	pF/m		
Flexiform 401 X HFJ	Solid	1.67	**5.31**	6.10	**7.10**	122	3,600	94	40	**40281062020**
Flexiform 402 X HFJ	Solid	0.94	**3.00**	3.55	**4.50**	50	2,000	94	10	**3135040202**

Electrical data

Attenuation (dB/100m at 20°C)		
Frequency (MHz)	Flexiform 401 X HFJ	Flexiform 402 X HFJ
400	16	23
1,000	25	39
2,000	37	57
3,000	45	71
4,000	52	82
5,000	59	92
6,000	65	101

Power (Watts at 40°C)		
Frequency (MHz)	Flexiform 401 X HFJ	Flexiform 402 X HFJ
400	445	186
1,000	281	112
2,000	199	77
3,000	163	63
4,000	141	54
5,000	126	48
6,000	115	44

Identification

Colours		
Part	Colour	Notes / Printing
Dielectric	Natural	
Outer sheath	Blue	Habia Cable - Description - Article No. - Year-Week - Batchcode

Characteristics & key properties

CE	RoHS 2011/65/EU 2015/863/EU	REACH EC No. 1907/2006	LVD 2014/35/EU	Chemically resistant	Flame retar-dant	Low smoke generation	Velocity of propagation 71%

Materials // Dielectric and sheath data

The Flexiform range uses three materials as its base, from which the range is almost endlessly modifiable with alternative colours, sizes, impedances, or even other sheath materials from Habia Cable's extensive range.

Dielectric

PTFE has the best electrical properties of any solid plastic material. It's use as dielectric gives the Flexiform range the best possible electrical properties.

By introducing air into the dielectric (profiling), the exceptionally low dielectric constant is reduced even further without compromising the material, allowing for improved electrical properties in the Flexiform L types, or keeping the the electrical properties, but with reduced diameters in the Flexiform SL types.

Sheaths

Three standard options exist for Flexiform:

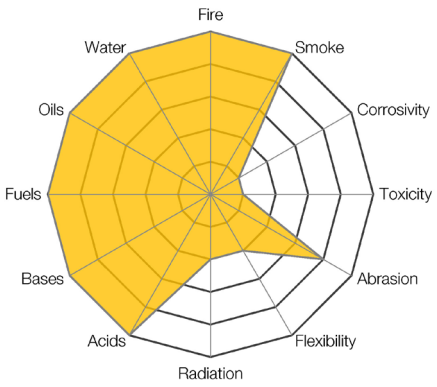
Unshielded: With its tinned overall braid, Flexiform doesn't actually need an outer sheath for moisture resistance, working like a solid copper tube. Marking can be applied directly to the braid.

FJ: FEP shares many of the same physical and mechanical properties as PTFE. As such, the Flexiform FJ types maintain a high temperature resistance along with excellent mechanical and chemical resistance properties.

HFJ: HFS 80 T is one of Habia's most highly flame retardant sheath materials in addition to being a fully Low Smoke Zero Halogen (LSZH) product.

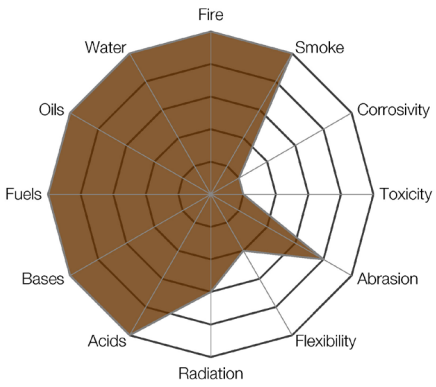
PTFE

Used as dielectric for all types



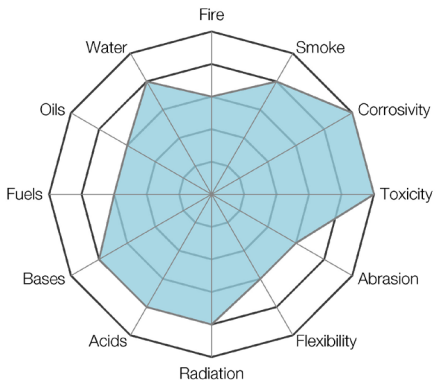
FEP

Used as insulation for FJ variants

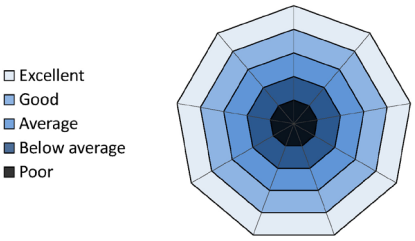


HFS 80 T

Used as outer sheath for HFJ variants



Spider graphs
Our material performance can be compared via these simple key-property grpahs. More detailed information can be provided on request.



Important
This information is offered solely as a convenience to Habia Cable's customers and is intended only as a guide. Data is based on typical values and might vary depending on cable construction and processing method.

Habia Cable has compiled the information contained herein from what it believes to be accurate and factual sources as of the date printed. Any changes in the data will be made without notification.

Material variations
Although the mechanical performance presented in these spider graphs shoud remain relatively unchanged for all types, it should be noted that there may be some subtle variations, particularly between solid and profiled dielectric types.

Habia Cable is one of Europe's leading wire and cable manufacturers. We develop, manufacture and market custom design cables and harness systems for demanding applications in a number of diverse industries.

The company has a global presence and worldwide sales of custom design and standard products in more than 50 countries.

We aim to provide a high level of customer service and technical competence with competitive lead times and low minimum order quantities.

HEAD OFFICE, SWEDEN
Habia Cable AB
Tel: +46 (0) 8 630 74 40
Email: info.se@habia.com

CHINA
Habia Cable China Ltd
Tel: +86 (0) 5198 511 8010
Email: info.cn@habia.com

DENMARK
Habia Cable AB
Tel: +46 (0) 72 214 4492
Email: info.dk@habia.com

FINLAND
Habia Cable AB
Tel: +358 (0) 20 155 25 30
Email: info.fi@habia.com

FRANCE
Habia Cable SA
Tel: +33 (0) 2 38 22 15 70
Email: info.fr@habia.com

GERMANY
Habia Cable GmbH
Tel: +49 (0) 731 70 47 95 0
Email: info.de@habia.com

INDIA
Habia Cable
Tel: +91 99 728 82254
Email: info.in@habia.com

KOREA
Habia Cable Asia Ltd
Tel: +82 (0) 2 504 6674
Email: info.kr@habia.com

NETHERLANDS
Habia Cable BV
Tel: +31 (0) 76 541 6400
Email: info.nl@habia.com

NORWAY
Habia Cable AB
Tel: +47 99 09 09 30
Email: info.no@habia.com

UNITED KINGDOM
Habia Cable Limited
Tel: +44 (0) 1454 412522
Email: info.uk@habia.com

FULL CONTACT DETAILS
can be found at habia.com

Flexiform_2018-07