



ULCSA
Wires, cables and coaxials

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Introduction

Habia Cable has more than 50 years' experience in the design and manufacture of wires and cables for demanding applications. With a comprehensive understanding of the customers' requirements and applications ranging from permanent installations to highly dynamic applications, we have worked closely with engineers to supply interconnection solutions that will fulfil all aspects of a system's functionality and reliability.

Habia Cable is recognised by UL under UL File No.: [AVLV2.E75929](#) and to the supply of cable to Appliance Wiring Material certified for Canada - Component under cUL File No.: [AVLV8.E75929](#). Habia are also listed for the manufacture of Communication cables (DUZX) under UL File No.: [E170236](#) and Power-limited circuit cables (CL2) under UL File No.: [E254120](#). Habia Cable have approval to supply CSA approved products under File No.: [66981](#).

Further information can be found on either UL's Online Certification Directory, or CSA International's Certified Product Listings internet pages.

Habia Cable's product range of approved UL Styles incorporates single cores, twisted wires, multicore cables and coaxials. Although not limited to them, Habia specialises in the high temperature, thin wall UL Styles covered by the four main fluoropolymer materials: ETFE, FEP, PFA and PTFE.

ETFE

Offering an excellent range of physical properties such as mechanical toughness, flex-life, fire performance and chemical resistance. ETFE cores are ideal for all-round general purpose use and are used extensively in both military and industrial applications.

FEP

Offering good electrical properties and excellent fire performance. It is the most flexible of the fluoropolymer insulations and is ideal for use in long lengths. FEP is primarily used in data and coaxial cables as well as for medical applications and control/signal cables for high temperature environments.

PFA

Intended for applications up to 260°C. Sharing many of the properties of PTFE, the high temperature rating and low out-gassing properties of PFA means that it is often used in industrial applications such as gas turbines and under vacuum conditions.

PTFE

Habia Cable's foremost high temperature insulation material, intended for use up to 260°C. PTFE has excellent mechanical properties, including out-gassing and solder resistance and offers unparalleled electrical performance. Typical applications for PTFE include gas ignition wires, gas turbines, vacuum applications and high temperature data cables.

UL Yellow card



cUL Yellow card



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UL & CSA Over-view of approved styles

Approved types

Insulated wires
Twisted pairs
Jacketed wires and cables
Low voltage cables
Coaxial cables

Surface marking of UL appliance wiring material (AWM)

To include: Company name, voltage rating, temperature rating, conductor size, conductor material (if other than copper) and usage.

For products meeting Canadian requirements: Surface printing is required for finished products having an overall diameter of 1,3mm or larger.

All marking requirements are in accordance with the marking section in UL 758.

UL Style Number							
Insulated wires				twisted wires	single core cables	multi-core cables	coaxial cables
ETFE	FEP	PFA	PTFE				
Style 1508	Style 1226	Style 1707	Style 1164	Style 2525	Style 1419	Style 2448	Style 1354
Style 1513	Style 1227	Style 1708	Style 1180	Style 21171	Style 1666	Style 2464	Style 1375
Style 1516	Style 1330	Style 1709	Style 1198		Style 1667	Style 2654	Style 1637
Style 1517	Style 1331	Style 1710	Style 1199		Style 1668	Style 2747	Style 1750
Style 1523	Style 1332	Style 1716	Style 1212		Style 1669	Style 2748	Style 10245
Style 1558	Style 1333	Style 1726	Style 1213		Style 1751	Style 2749	
Style 1586	Style 1371	Style 1727	Style 1371		Style 1753	Style 2750	
Style 1609	Style 1538	Style 1857	Style 1512		Style 1754	Style 2895	
Style 1610	Style 1577	Style 1858	Style 1538		Style 1755	Style 2983	
Style 1643	Style 1591	Style 1859	Style 1577		Style 1880	Style 4296	
Style 1644	Style 1592	Style 1860	Style 1584		Style 1881	Style 20219	
Style 1670	Style 1716	Style 1882	Style 1659		Style 1883	Style 20220	
Style 1814	Style 1723	Style 5431	Style 1716		Style 1884	Style 20221	
Style 1827	Style 1766	Style 10313	Style 1723		Style 1885	Style 20222	
Style 1828	Style 1847		Style 1744		Style 1999	Style 20223	
Style 1829	Style 10072		Style 1746		Style 10057	Style 20224	
Style 1831	Style 10313		Style 1815		Style 10231	Style 20225	
Style 1862	Style 10440		Style 10072			Style 20254	
Style 1863	Style 10445					Style 20276	
Style 1864						Style 20320	
Style 1868						Style 20475	
Style 1990						Style 20640	
Style 10126						Style 20950	
Style 10231							
Style 10277							
Style 10278							

Single core

Temperature	Up to +150°C
Voltage	Up to 600V
Flame retardant	
Low smoke generation	

Conductor items designated with: B, T, S, N, H, C and/or M have the conductor plating specified by the UL Style. For items specified with: A, please refer to the UL Style for details of the Cu Alloy.

Construction

Conductor	Bare Copper (B), Tin Plated Copper (T) Silver Plated Copper (S), Nickel Plated Copper (N) Silver Plated Copper Covered Steel (C) Litz Magnet Wire (M), High Strength Alloy (H) Copper Alloy (A)	Insulation	ETFE
Shield	-	Sheath	-

Identification

AWM STYLE TEMPERATURE VOLTAGE SIZE Habia Cable ZZ
 Marking (e.g. **AWM Style 1508 30V 105°C 20 AWG Habia Cable AB**)
 ZZ to be replaced with production: Sweden: 'AB', Germany: 'G', China: 'Changzhou Plant'

Application

ETFE offers excellent mechanical toughness, flex-life, fire performance and chemical resistance.

UL Style No.	Rating		Size		Construction				Usage	
	voltage	temp °C	AWG		conductor type	wall thickness (mils)		wall thickness (mm)		
			min	max		min	min avg.	min		min avg.
Style 1508	30	105	32	20	T,S,N,H	5	5,5	0,13	0,14	In back panel areas of machines
Style 1513	-	105	36	20	T,S,N,H	4,5	5	0,11	0,13	In back panel areas of machines
Style 1516	-	105	36	10	B,T	3	4	0,08	0,10	Internal wiring of machines
Style 1517	-	105	32	20	B,T	5	6	0,13	0,15	In back panel areas of machines
Style 1523	-	105	32	20	T,S,N,H	-	5	-	0,13	In back panel areas of machines
Style 1558	-	125	34	16	T,S,N,H	3	4	0,08	0,10	In back panel areas of machines
Style 1586	-	105	36	20	T,S,N,A	5	5,5	0,13	0,14	In back panel areas of electronic equipment
			19	16		7	8	0,18	0,20	
			15	10		12	13	0,30	0,33	
			9	6		18	20	0,46	0,51	
Style 1609	125	105	36	20	T,S,N,C,A	5	5,5	0,13	0,14	In back panel areas of electronic equipment or 300V peak
			19	16		7	8	0,18	0,20	
			15	10		12	13	0,30	0,33	
			9	6		18	20	0,46	0,51	
Style 1610	-	105	32	10	B,T,S,N,H	9	10	0,23	0,25	Internal wiring of electronic equipment
Style 1643	300	150	32	10	-	12	13	0,30	0,33	Internal wiring of electronic equipment or 600V peak
			8	2		18	20	0,46	0,51	
			1	4/0		27	30	0,69	0,76	
Style 1644	600	150	30	10	-	18	20	0,46	0,51	Internal wiring of electronic equipment or 2500V peak
			8	2		27	30	0,69	0,76	
			1	4/0		40	45	1,02	1,14	
Style 1670	-	150	32	14	T,S,N,H	4	5	0,10	0,13	Internal wiring of electronic equipment
Style 1814	150	150	36	20	T,S,N,C,A	5	6	0,13	0,15	Internal wiring or 300V peak
Style 1827	125	150	32	20	B,T	5	5,5	0,13	0,14	Internal wiring of electronic equipment
			19	15		7	8	0,18	0,20	
			14	10		12	13	0,30	0,33	
Style 1828	300	150	32	10	B,T	10	13	0,20	0,33	Internal wiring of electronic equipment
Style 1829	600	150	32	10	B,T	18	20	0,46	0,51	Internal wiring of electronic equipment
Style 1831	150	105	24	18	T,S,N,H	4	5	0,10	0,13	Internal wiring (totally enclosed)
Style 1862	125	150	32	16	B,T,S,N,H	9	10	0,23	0,25	Internal wiring of electronic equipment
Style 1863	300	125	32	10	T,S,N,C,A	12	13	0,30	0,33	Internal wiring of electronic equipment
Style 1864	600	125	30	10	T,S,N,C,A	18	20	0,46	0,51	Internal wiring of electronic equipment
			8	2		27	30	0,69	0,76	
			1	4/0		40	45	1,02	1,14	
Style 1868	30	60	40	-	-	2	-	0,05	-	Internal wiring of Class 2 circuits
Style 1990	600	105	30	10	T,S,N,C,A	18	20	0,46	0,51	Internal wiring of appliances or 2500V peak
			8	2		27	30	0,69	0,76	
			1	4/0		40	45	1,02	1,14	
			36	14		9	10	0,23	0,25	
Style 10126	600	150	12	10	-	13	15	0,33	0,38	Internal wiring of appliances
			8	4		22	25	0,56	0,64	
			3	1		31	35	0,79	0,89	
			1/0	4/0		40	45	1,02	1,14	
			50	22		1,2	1,4	0,03	0,04	
Style 10231	30	90	50	22	-	1,2	1,4	0,03	0,04	Internal wiring and in jacketed cables
Style 10277	300	105	32	10	B,T,S,N,H	5	7	0,13	0,18	Internal wiring of electronic equipment
Style 10278	300	105	30	27	C,A	4,7	5,3	0,12	0,14	For further processing in jacketed cables
			24	-		5,4	6	0,14	0,15	
			22	-		6	6,7	0,15	0,17	
			20	-		7,2	8,1	0,18	0,20	

Available colours

00 Black 11 Brown 22 Red 33 Orange 44 Yellow 55 Green 66 Blue 77 Violet 88 Grey 99 White 29 Pink 89 Natural 45 Yel/Grn

Ref: UL_ETFE_04 Created: CJV Approved: AE Date: 2013-09-12

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Single core

Temperature	Up to +200°C
Voltage	Up to 1000V
Flame retardant	
Low smoke generation	

Conductor items designated with: B, T, S, N, H, C and/or M have the conductor plating specified by the UL Style. For items specified with: A, please refer to the UL Style for details of the Cu Alloy.

Construction

Conductor	Bare Copper (B), Tin Plated Copper (T) Silver Plated Copper (S), Nickel Plated Copper (N) Silver Plated Copper Covered Steel (C) Litz Magnet Wire (M), High Strength Alloy (H) Copper Alloy (A)	Insulation	FEP
Shield	-	Sheath	-

Identification

Marking	AWM STYLE TEMPERATURE VOLTAGE SIZE Habia Cable ZZ (e.g. 1226 30V 80°C 20 AWG Habia Cable AB) ZZ to be replaced with production: Sweden: 'AB', Germany: 'G', China: 'Changzhou Plant'
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Application

FEP has good electrical properties and excellent fire performance, relatively flexible and good for lengths.

UL Style No.	Rating		Size		Construction					Usage
	voltage	temp °C	min	max	conductor type	wall thickness (mils)		wall thickness (mm)		
Style 1226	-	80 60 in oil	32 19	20 14	B,T,S,N,A	7 12	8 13	0,18 0,31	0,20 0,33	In office appliances, exposed to oil not exceeding 60°C
Style 1227	-	105 60 in oil	32 19	20 10	-	7 12	8 13	0,18 0,31	0,20 0,33	In office appliances exposed to temp. not exceeding 105°C, exposed to oil not exceeding 60°C
Style 1330	600	200 80 in oil	30 9 1	10 2 4/0	-	18 27 40	20 30 45	0,46 0,69 1,02	0,51 0,76 1,15	Internal wiring, or for use in gasoline, gasoline vapour and 80°C in oil
Style 1331	600	150 60 in oil 80 in oil	30 8 1	10 2 4/0	M	18 27 40	20 30 45	0,46 0,69 1,02	0,51 0,76 1,15	Internal wiring or for use in gasoline, gasoline vapour and 80°C in oil
Style 1332	300	200 80 in oil	30	10	-	12	13	0,31	0,33	Internal wiring or for use in gasoline, gasoline vapour, 80°C in oil and / or 600V peak
Style 1333	300	150 80 in oil	30	10	M	12	13	0,31	0,33	Internal wiring or for use in gasoline, gasoline vapour, 80°C in oil, or 600V peak
Style 1371	-	105 60 in oil 80 in oil	36 19 15 9	20 16 10 6	B,T	5 7 12 18	5,5 8 13 20	0,13 0,18 0,31 0,46	0,14 0,20 0,33 0,51	Internal wiring or for use in gasoline, gasoline vapour and 60°C / 80°C in oil
Style 1538	125	105 60 in oil 80 in oil	36 19 14 9	20 15 10 6	-	5 7 12 18	5,5 8 13 20	0,13 0,18 0,31 0,46	0,14 0,20 0,33 0,51	In back panel areas of machines or suitable for use in gasoline, gasoline vapour and 60°C / 80°C in oil or 300V peak
Style 1577	-	200	32	16	-	10	12	0,25	0,31	Internal wiring of appliances
Style 1591	300	150	32	16	T,S,N	14	16	0,36	0,41	Internal wiring of appliances
Style 1592	300	200	32	16	T,S,N	14	16	0,36	0,41	Internal wiring of appliances
Style 1716	150	150 60 in oil 80 in oil	50 19 14 9	20 15 10 6	T,M	5 7 12 18	5,5 8 13 20	0,13 0,18 0,31 0,46	0,14 0,20 0,33 0,51	Internal wiring of machines or for UL 1950 applications or suitable for use in gasoline, gasoline vapour and 60°C / 80°C in oil or for 300V peak
Style 1723	-	200	32	16	-	9	10	0,23	0,25	In back panel areas of machines
Style 1766	30	80	42	-	-	2	3	0,05	0,08	Internal wiring of Class 2 circuits
Style 1847	30	105	40	-	-	1,5	3	0,04	0,08	Internal wiring of Class 2 circuits
Style 10072	150	200 60 in oil 80 in oil	32 9	10 6	S,N,C,A	8 18	9 20	0,20 0,46	0,23 0,51	In back panel areas of machines or suitable for use in gasoline, gasoline vapour and 60°C / 80°C in oil or 300V peak
Style 10313	600	200 80 in oil	40	9	M	8	9	0,20	0,23	Internal wiring or for use in gasoline, gasoline vapour 80°C in oil or 600V peak
Style 10440	1000	200	30	10	-	18	20	0,46	0,51	Internal wiring of appliances
Style 10445	30	125	40	-	-	1,5	-	0,04	-	Internal wiring of Class 2 circuits

Available colours

00 Black	11 Brown	22 Red	33 Orange	44 Yellow	55 Green	66 Blue	77 Violet	88 Grey	99 White	29 Pink	89 Natural	45 Yel/Grn
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Ref: UL_FEP_03 Created: CJV Approved: AE Date: 2013-09-12

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Single core

Temperature	Up to +250°C
Voltage	Up to 1000V
Flame retardant	
Low smoke generation	

Conductor items designated with: B, T, S, N, H, C and/or M have the conductor plating specified by the UL Style. For items specified with: A, please refer to the UL Style for details of the Cu Alloy.

Construction

Conductor	Bare Copper (B), Tin Plated Copper (T) Silver Plated Copper (S), Nickel Plated Copper (N) Silver Plated Copper Covered Steel (C) Litz Magnet Wire (M), High Strength Alloy (H) Copper Alloy (A)	Insulation	ETFE
Shield	-	Sheath	-

Identification

Marking AWM STYLE TEMPERATURE VOLTAGE SIZE Habia Cable ZZ
(e.g. **AWM Style 1707 30V 200°C 20 AWG Habia Cable AB**)
ZZ to be replaced with production: Sweden: 'AB', Germany: 'G', China: 'Changzhou Plant'

Application

PFA is a thin wall insulation and jacketing materials, intended for applications up to 250°C.

UL Style No.	Rating		Size		Construction					Usage
	voltage	temp °C	AWG		conductor type	wall thickness (mils)		wall thickness (mm)		
			min	max		min	min avg.	min	min avg.	
Style 1707	30	200	32	20	-	4	5	0,10	0,13	Internal wiring of electronic equipment in Class 2 circuits only
Style 1708	-	200	32	20	-	4	5	0,10	0,13	Internal wiring of electronic equipment
Style 1709	300	200	32	10	-	11	13	0,28	0,33	Internal wiring of appliances or electronic equipment
Style 1710	600	200	32	10	-	18	20	0,46	0,51	Internal wiring of appliances or electronic equipment
			8	2		27	30	0,69	0,76	
			1	4/0		40	45	1,02	1,15	
Style 1716	150	150 60 in oil 80 in oil	50	20	M	5	5,5	0,13	0,14	Internal wiring of machines or for UL 1950 applications or suitable for use in gasoline, gasoline vapour and 60°C / 80°C in oil or for 300V peak
			19	15		7	8	0,18	0,20	
			14	10		12	13	0,31	0,33	
			9	6		18	20	0,46	0,51	
Style 1726	300	250	32	10	-	12	13	0,31	0,33	Internal wiring of appliances or electronic equipment
			8	6		18	20	0,46	0,51	
			4	2		27	30	0,69	0,76	
			1	4/0		40	45	1,02	1,15	
Style 1727	600	250	32	10	-	18	20	0,46	0,51	Internal wiring of appliances or electronic equipment
			8	2		27	30	0,69	0,76	
			1	4/0		40	45	1,02	1,15	
Style 1857	150	150	32	16	B,T	9	10	0,23	0,26	Internal wiring of appliances or electronic equipment
Style 1858	300	150	32	10	B,T	12	13	0,31	0,33	Internal wiring of appliances or electronic equipment
Style 1859	600	150	32	10	B,T	18	20	0,46	0,51	Internal wiring of appliances or electronic equipment
			8	2		27	30	0,69	0,76	
			1	4/0		40	45	1,02	1,15	
Style 1860	150	200	32	16	-	9	10	0,23	0,26	Internal wiring of appliances or electronic equipment
Style 1882	150	250	36	16	-	8	10	0,20	0,26	Internal wiring of appliances or electronic equipment
Style 5431	1000	200	36	9	-	18	20	0,46	0,51	Internal wiring or for use in gasoline, gasoline vapour 80°C in oil or 600V peak
			8	7		40	45	1,02	1,15	
			6	2		54	60	1,37	1,53	
			1	-		72	80	1,83	2,03	
Style 10313	600	200 80 in oil	40	9	M	8	9	0,20	0,23	Internal wiring or for use in gasoline, gasoline vapour 80°C in oil or 600V peak

Available colours

00 Black 11 Brown 22 Red 33 Orange 44 Yellow 55 Green 66 Blue 77 Violet 88 Grey 99 White 29 Pink 89 Natural 45 Yel/Grn

PTFE insulated wires

≤1kV
-65°C/+250°C

Single core

Temperature	Up to +250°C
Voltage	Up to 1000V
Flame retardant	
Low smoke generation	

Conductor items designated with: B, T, S, N, H, C and/or M have the conductor plating specified by the UL Style. For items specified with: A, please refer to the UL Style for details of the Cu Alloy.

Construction

Conductor	Bare Copper (B), Tin Plated Copper (T) Silver Plated Copper (S), Nickel Plated Copper (N) Silver Plated Copper Covered Steel (C) Litz Magnet Wire (M), High Strength Alloy (H) Copper Alloy (A)	Insulation	PTFE
Shield	-	Sheath	-

Identification

AWM STYLE TEMPERATURE VOLTAGE SIZE Habia Cable ZZ
 Marking (e.g. **AWM Style 1164 300V 150°C 20 AWG Habia Cable AB**)
 ZZ to be replaced with production: Sweden: 'AB', Germany: 'G', China: 'Changzhou Plant'

Application

PTFE has excellent mechanical properties, including out-gassing and solder resistance.

UL Style No.	Rating		Size		Conductor type	Construction				Usage
	voltage	temp °C	min	AWG max		wall thickness (mils)		wall thickness (mm)		
Style 1164	300	150 80 in oil	32	10	S,N,A	12	13	0,31	0,33	Internal wiring or for use in gasoline, gasoline vapour and 60°C / 80°C in oil or 600V peak
Style 1180	300	200 80 in oil	32	10	S,N	12	13	0,31	0,33	Internal wiring or for use in gasoline, gasoline vapour and 60°C / 80°C in oil or 600V peak
Style 1198	600	150 60 in oil 80 in oil	30 8 1	10 2 4/0	-	18 27 40	20 30 45	0,46 0,69 1,02	0,51 0,76 1,15	Internal wiring of refrigerators / gas or oil-fired domestic heating / internal wiring of lighting in refrigerators where exposed to temp. not exceeding 105°C or where exposed to oil not exceeding 60°C / 80°C
Style 1199	600	200 80 in oil	30 8 1	10 2 4/0	-	18 27 40	20 30 45	0,46 0,69 1,02	0,51 0,76 1,15	Internal wiring or for use in gasoline, gasoline vapour and 80°C in oil or 2500V peak
Style 1212	-	80 60 in oil	36	16	-	7	8	0,18	0,20	Internal wiring, not subjected to mechanical abuse, oil resistant to 60°C
Style 1213	-	105 60 in oil	36	16	-	7	8	0,18	0,20	Internal wiring, not subject to mechanical abuse, oil resistant to 60°C
Style 1371	-	105 60 in oil 80 in oil	36 19 15 9	20 16 10 6	B,T	5 7 12 18	5,5 8 13 20	0,13 0,18 0,31 0,46	0,14 0,20 0,33 0,51	Internal wiring or for use in gasoline, gasoline vapour and 60°C / 80°C in oil
Style 1512	-	105	16	14	S,N	9	10	0,23	0,25	Only in appliances where exposed to temp. not exceeding 105°C
Style 1538	125	105 60 in oil 80 in oil	36 19 14 9	20 15 10 6	-	5 7 12 18	5,5 8 13 20	0,13 0,18 0,31 0,46	0,14 0,20 0,33 0,51	In back panel areas of machines or suitable for use in gasoline, gasoline vapour and 60°C / 80°C in oil or 300V peak
Style 1577	-	200	32	16	-	10	12	0,25	0,31	Internal wiring of appliances
Style 1584	1000	200	30	10	S,N,C,A	20	22	0,51	0,56	Internal wiring of appliances
Style 1659	600	250 80 in oil	26 8 1	10 2 4/0	-	18 27 40	20 30 45	0,46 0,69 1,02	0,51 0,76 1,15	Internal wiring or for use in gasoline, gasoline vapour and 80°C in oil or 2500V peak
Style 1716	150	150 60 in oil 80 in oil	50 19 14 9	20 15 10 6	M	5 7 12 18	5,5 8 13 20	0,13 0,18 0,31 0,46	0,14 0,20 0,33 0,51	Internal wiring of machines, or for UL 1950 applications, or suitable for use in gasoline, gasoline vapour and 60°C or 80°C in oil, or for 300V peak
Style 1723	-	200	32	16	-	9	10	0,23	0,25	In back panel areas of machines
Style 1744	300	80 80 in oil	32	10	B,T,S,N,A	12	13	0,31	0,33	Internal wiring or for use in gasoline, gasoline vapour and 80°C in oil or 600V peak
Style 1746	125	200 60 in oil	20	16	S,N,C,A	6	8	0,15	0,20	In back panel areas of machines and where exposed to oil not exceeding 60°C
Style 1815	300	250	32	10	-	12	13	0,31	0,33	Internal wiring of appliances
Style 10072	150	200 60 in oil 80 in oil	32 9	10 6	S,N,C,A	8 18	9 20	0,20 0,46	0,23 0,51	In back panel areas, or suitable for use in gasoline, gasoline vapour and 60°C or 80°C in oil, or 300V peak

Available colours

00 Black 11 Brown 22 Red 33 Orange 44 Yellow 55 Green 66 Blue 77 Violet 88 Grey 99 White 29 Pink 89 Natural 45 Yel/Grn

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Twisted pairs

≤300V
-65°C/+250°C

Twisted pair

Temperature	Up to +250°C
Voltage	Up to 300V
Flame retardant	
Low smoke generation	

Conductor items designated with: B, T, S, N, H, C and / or M have the conductor plating specified by the UL Style. For items specified with: A, please refer to the UL Style for details of the Cu Alloy.

Construction

Conductor	Bare Copper (B), Tin Plated Copper (T) Silver Plated Copper (S), Nickel Plated Copper (N) Silver Plated Copper Covered Steel (C) Litz Magnet Wire (M), High Strength Alloy (H) Copper Alloy (A)	Insulation	FEP, PTFE
Shield	-	Sheath	-

Identification

Marking	-
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UL Style No.	Rating		Size		Construction					Usage	
	voltage	temp °C	min	max	conductor type	insulation	min avg. mm	shield	sheath		min avg. mm
Style 2525	300	200	30 (26)	18	S,N (B,T)	PTFE	0,25 (10 mils)	-	-	-	Electronic, not subjected to mechanical abuse
Style 21171	150	250	30 (26)	18	S,N (B,T)	FEP PFA	0,25 (10 mils)	-	-	-	Internal wiring, not subjected to mechanical abuse

Single conductor cables

≤1kV
-65°C/+250°C

Shielded signal cable

Temperature	Up to +250°C
Voltage	Up to 1000V
Flame retardant	
Low smoke generation	

Conductor items designated with: B, T, S, N, H, C and/or M have the conductor plating specified by the UL Style. For items specified with: A, please refer to the UL Style for details of the Cu Alloy.

Construction

Conductor	Bare Copper (B), Tin Plated Copper (T) Silver Plated Copper (S), Nickel Plated Copper (N) Silver Plated Copper Covered Steel (C) Litz Magnet Wire (M), High Strength Alloy (H) Copper Alloy (A)	Insulation	ETFE, FEP, PTFE Any suitable UL Style
	Shield		Tin Plated Copper (T) Silver Plated Copper (S) Nickel Plated Copper (N)

Identification

Marking AWM STYLE TEMPERATURE VOLTAGE SIZE Habia Cable ZZ
(e.g. **UL 1419 AWG 18 70000000 AWM 1419 Habia Cable AB 300V 150°C 2012-W20**)
ZZ to be replaced with production: Sweden: 'AB', Germany: 'G', China: 'Changzhou Plant'

UL Style No.	Rating		Size		Construction					Usage	
	voltage	temp °C	min	AWG max	conductor type	insulation	min avg. mm	shield	sheath		min avg. mm
Style 1419	-	150	30	16	S,C	FEP PTFE	0,20 (8mils)	Optional	FEP PTFE	0,20 (8 mils)	In electronic equipment
Style 1666	300	150 80 in oil	-	-	-	Any	-	Optional	FEP	0,51 (20 mils)	Internal wiring or for use 80°C in oil or 600V peak
Style 1667	600	150 80 in oil	-	-	-	Any	-	Optional	FEP	0,51 (20 mils)	Internal wiring or for use 80°C in oil or 2500V peak
Style 1668	300	200 80 in oil	-	-	-	Any	-	Optional	FEP	0,51 (20 mils)	Internal wiring or for use 80°C in oil or 600V peak
Style 1669	600	200 80 in oil	-	-	-	Any	-	Optional	FEP	0,51 (20 mils)	Internal wiring or for use 80°C in oil or 2500V peak
Style 1751	125	105	40	-	-	Any	-	Optional	ETFE	0,33 (13 mils)	Internal wiring of electronic equipment
Style 1753	-	90	40	-	-	Any	-	Optional	ETFE	0,33 (13 mils)	Internal wiring of electronic equipment
Style 1754	125	90	40	-	-	Any	-	Optional	ETFE	0,33 (13 mils)	Internal wiring of electronic equipment
Style 1755	300	105	40	-	-	Any	-	Optional	ETFE	0,33 (13 mils)	Internal wiring of electronic equipment
Style 1880	600	150	36	16	B,T	Any	-	Optional	ETFE	0,38 (15 mils)	Internal wiring of electronic equipment
Style 1881	300	150	36	16	B,T	Any	-	Optional	ETFE	0,25 (10 mils)	Internal wiring of electronic equipment
Style 1883	150	250	-	-	-	Any	-	Optional	PFA	0,20 (8 mils)	Internal wiring of electronic equipment
Style 1884	300	250	-	-	-	Any	0,20 (8 mils)	Optional	PFA	0,25 (10 mils)	Internal wiring of electronic equipment
Style 1885	600	250	-	-	-	Any	0,23 (9 mils)	Optional	PFA	0,38 (15 mils)	Internal wiring of electronic equipment
Style 1999	300	150	36	10	B,T	FEP	0,46 (18 mils)	Optional	FEP	0,25 (10 mils)	Internal wiring of electronic equipment
Style 10057	300	60	40	-	B,T	Any	-	Optional	PUR	refer to spec.	External interconnection or internal wiring of electronic equipment
Style 10231	30	90	50	22	-	ETFE FEP PFA	0,04 (1,4 mils)	Optional	ETFE FEP PFA	0,03 (1 mils)	Internal wiring of Class 2 circuits in electrical equipment or as insulated single in jacketed multi-conductor cables

Multi core cable

Temperature	Up to +250°C
Voltage	Up to 600V
Flame retardant	
Low smoke generation	

Conductor items designated with: B, T, S, N, H, C and / or M have the conductor plating specified by the UL Style. For items specified with: A, please refer to the UL Style for details of the Cu Alloy.

Construction

Conductor	Bare Copper (B), Tin Plated Copper (T) Silver Plated Copper (S), Nickel Plated Copper (N) Silver Plated Copper Covered Steel (C) Litz Magnet Wire (M), High Strength Alloy (H) Copper Alloy (A)	Insulation	Any suitable UL Style
Shield	Tin Plated Copper (T) Silver Plated Copper (S) Nickel Plated Copper (N)	Sheath	ETFE, FEP, PFA PTFE, PUR, PVC Silicone

Identification

Marking TYPE ORDER REFERENCE AWM Habia Cable ZZ VOLTS TEMP YEAR-WEEK
(e.g. **UL 2448 AWG 18 700000000 AWM 2448 Habia Cable AB 30V 80°C 2012-W20**)
ZZ to be replaced with production: Sweden: 'AB', Germany: 'G', China: 'Changzhou Plant'

UL Style No.	Rating		Size		Construction						Usage
	voltage	temp °C	min	AWG max	conductor type	insulation	min avg. mm	shield	sheath	min avg. mm	
Style 2448	30	80	40	-	-	Any	-	Optional	PVC	refer to spec.	Internal wiring or external interconnection (Class 2)
Style 2464	300	80	-	-	-	Any	-	Optional	PVC	refer to spec.	Internal wiring or external interconnection
Style 2654	300	90	36	6	B,T	Any	-	Optional	PVC	refer to spec.	External interconnection of electronic equipment
Style 2747	300	150	-	-	-	Any	-	Optional	FEP	refer to spec.	Internal wiring or for use 80°C in oil or 600V peak
Style 2748	600	150 80 in oil	-	-	-	Any	-	Optional	FEP	refer to spec.	Internal wiring or for use 80°C in oil or 2500V peak
Style 2749	300	200 80 in oil	-	-	-	Any	-	Optional	FEP	refer to spec.	Internal wiring or for use 80°C in oil or 600V peak
Style 2750	600	200 80 in oil	-	-	-	Any	-	Optional	FEP	refer to spec.	Internal wiring or for use 80°C in oil or 2500V peak
Style 2895	300	200 80 in oil	-	-	-	Any	-	Optional	FEP	refer to spec.	Internal wiring or for use 80°C in oil or 600V peak
Style 2983	150	150	-	-	B,T	Any	0,13 (5 mils)	Optional	FEP	refer to spec.	Internal wiring or for use 80°C in oil or 300V peak
Style 4296	125	105	50	-	B,T	Any	0,15 (6 mils)	Optional	Silicone	refer to spec.	Interconnecting cable for medical instruments
Style 20219	300	250	-	-	-	Any	-	Optional	PTFE	refer to spec.	Internal wiring or 600V peak
Style 20220	300 600	250	-	-	-	Any	-	Optional	PTFE	refer to spec.	Internal wiring or 2500V peak
Style 20221	300	150	-	-	-	Any	-	Optional	ETFE	refer to spec.	Internal wiring or 600V peak
Style 20222	600	150	-	-	-	Any	-	Optional	ETFE	refer to spec.	Internal wiring or 2500V peak
Style 20223	150	250	-	-	-	Any	-	Optional	PFA	refer to spec.	Internal wiring or 300V peak
Style 20224	300	250	-	-	-	Any	-	Optional	PFA	refer to spec.	Internal wiring or 600V peak
Style 20225	600	250	-	-	-	Any	-	Optional	PFA	refer to spec.	Internal wiring or 2500V peak
Style 20254	30	60	40	-	B,T	Any	-	Optional	PUR	refer to spec.	Internal wiring or external interconnection (Class 2)
Style 20276	30	80	40	-	-	Any	-	Optional	PVC	refer to spec.	Internal wiring or external interconnection (Class 2)
Style 20320	30	90	40	-	-	Any	-	Optional	PUR	refer to spec.	Internal wiring or external interconnection
Style 20475	300	60	40	-	-	Any	-	Optional	PUR	refer to spec.	Internal wiring or external interconnection
Style 20640	30	60	40	-	B,T	Any	-	Optional	PUR	refer to spec.	Internal wiring or external interconnection
Style 20950	300	90	36	-	B,T	Any	-	Optional	PUR	refer to spec.	External wiring

Coaxial cables

≤150V
-65°C/+200°C

Coax

Temperature	Up to +200°C
Voltage	Up to 150V
Flame retardant	
Low smoke generation	

Construction

Conductor	Bare Copper (B), Tin Plated Copper (T) Silver Plated Copper (S), Nickel Plated Copper (N) Silver Plated Copper Covered Steel (C) Litz Magnet Wire (M), High Strength Alloy (H) Copper Alloy (A)	Dielectric	ETFE, FEP, PTFE PFA, FRPE, PE
	Shield		Tin Plated Copper (T) Silver Plated Copper (S) Nickel Plated Copper (N)

Identification

AWM STYLE TEMPERATURE VOLTAGE SIZE Habia Cable ZZ
 Marking (e.g. **UL** Speedflex 195 **UL** 37000-195-01 **AWM** 1375 **Habia Cable** **AB** 30V 60°C 2012-W20)
 ZZ to be replaced with production: Sweden: 'AB', Germany: 'G', China: 'Changzhou Plant'

UL Style No.	Rating		Size		Construction					Usage	
	voltage	temp °C	min	AWG max	conductor type	dielectric	min mm	max mm	sheath		min avg. mm
Style 1354	30	80	44	-	-	ETFE FEP FRPE PE PFA PTFE	0,05 (2 mils)	3,18 (125 mils)	ETFE FEP FRPE PA PE PFA PTFE PUR PVC XLFRPE XLPE	-	Internal wiring of Class 2 circuits or as insulated single in jacketed multi-conductor cables
Style 1375	30	80	36	-	-	FEP PE PFA PTFE	0,18 (7 mils)	3,81 (150 mils)	ETFE FEP FRPE PA PE PFA PTFE PUR PVC	0,05 (2 mil)	Internal wiring of Class 2 circuits
Style 1637	30	90	40	18	-	FEP PFA PTFE	0,08 (3 mils)	-	ETFE FEP PFA PTFE PVC	0,03 (1 mil)	Internal wiring of Class 2 circuits, not exposed to movement or mechanical abuse
Style 1750	150	200	40	-	-	PTFE	0,38 (15 mils)	-	FEP	0,20 (8 mil)	Internal wiring of Class 2 or Class 3 circuits
Style 10245	30	105	40	-	-	ETFE FEP PFA PTFE	0,05 (2 mils)	3,18 (125 mils)	ETFE FEP PA PFA PTFE PVC	-	Internal wiring of Class 2 circuits or as insulated single in jacketed multi-conductor cables

