BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G50.602.6
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AT&T Co Standard

CABLE SPLICING—GENERAL
TEXTILE INSULATED CABLE

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1. GENERAL

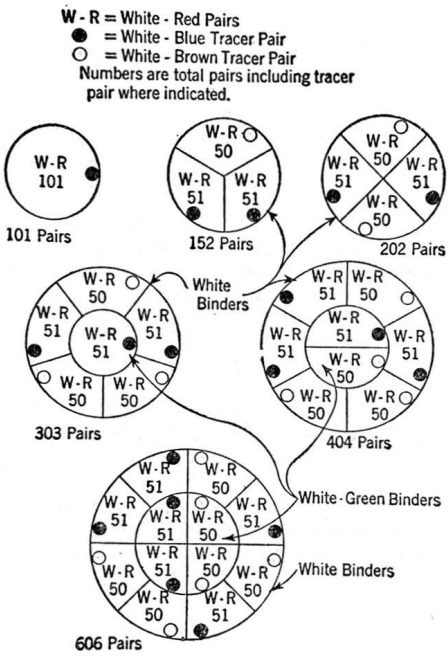
1.01 Textile insulated cables are generally spliced to strip paper or pulp insulated cables in connection with the termination of the latter type cables. The textile insulated cables are available with paired conductors and with quadded conductors.

2. PAIRED CONDUCTOR CABLES

2.01 Textile insulated cables with paired conductors are available with 19, 22 or 24-gauge wires as described in the following paragraphs.

2.02 **Types AFA and NFA.** Both types are made in 101, 152, 202, 303, 404 and 606-pair sizes. The NFA cables are used where higher insulation resistance is required than can be obtained with the non-enameled AFA cables.

TYPES AFA AND NFA CABLES



2.03 **Types BUA and OUA.** These are color code cables with 22-gauge conductors. The insulation on each pair is distinctively colored so that the pairs may be identified without testing. The pair sizes available and their use are as follows:

(a) BUA cable has tinned wires and the insulation is treated with cellulose acetate lacquer to eliminate the need for boiling out. It is available in 6, 11, 16, 21, 26, 31, 41, 51, 76, 101 and 202-pair sizes.

(b) OUA cable is similar to the BUA type except that the wires are tinned and enameled. It is available in the same pair sizes as BUA cable. It is intended for use where a higher degree of insulation resistance is required than can be obtained with non-enameled conductors and where it is advisable to avoid boiling out the conductors.

2.04 **Types AGA and NGA.** These types of cables are no longer manufactured but they will be found in the field. They are 22-gauge color code cables. The insulation of each pair is distinctively colored for identifying the pairs without testing. The pair sizes available and their use are as follows:

(a) AGA cable has tinned wires and was manufactured in 6, 11, 16, 26, 31, 41, 51, 76, 101, 152 and 202-pair sizes. This type is generally used for terminating purposes in subscriber buildings, but the sizes smaller than 101 pairs may be used in central offices to supplement the AFA type.

(b) NGA cable is similar to the AGA type except that the wires are tinned and enameled. It is intended for use where a higher degree of insulation resistance is required than can be obtained with non-enameled conductors.

2.05 The Color Code used in the BUA, OUA, AGA and NGA cables is given in the following table.

Pair Number	Color		Pair Number	Color	
	Tip	Ring		Tip	Ring
1	W	B	20	W	SW
2	W	O	21-40	R	•
3	W	G	41-60	BK	•
4	W	BN	61-80	RW	•
5	W	S	81-100	BKW	•
6	W	BW	101-120	RBK	•
7	W	BO	121-140	BKO	•
8	W	BG	141-160	BKG	•
9	W	BBN	161-180	BKBN	•
10	W	BS	181-200	BKS	•
11	W	OW	201-220	RB	•
12	W	OG	221-240	RO	•
13	W	OBN	241-260	RG	•
14	W	OS	261-280	RBN	•
15	W	GW	281-300	RS	•
16	W	GBN	301†	W	R
17	W	GS	302†	W	BK
18	W	BNW	303†	R	BK
19	W	BNS			

B = Blue G = Green S = Slate
BK = Black O = Orange W = White
BN = Brown R = Red

• First 20 Ring colors repeated.

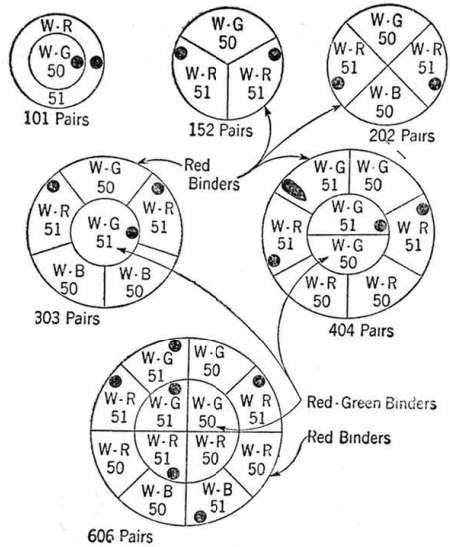
† The cables containing 6 to 101 pairs, the highest numbered pair has the same colors of insulation as those shown for the pair designated 301, also in the 152 and 202 pair cables, the two highest numbered pairs have colors of insulation as shown for pairs designated 301 and 302 respectively.

2.06 **CA-744 Cable.** This is a multiple unit type cable with 24-gauge tinned copper wires. It is intended primarily for terminating 24 or 26-gauge cables that are free from power exposure or are adequately protected by fuses or protective cable. It is available in 101, 152, 202, 303, 404 and 606-pair cables with the units arranged as shown in the following diagrams. The units are designated as White-Green, White-Red and White-Blue. Actually in a White-Green unit the pairs are alternately colored White-Green and White-White Green. Similarly, in the White-Red units the pairs are alternately colored White-Red and White-White Red, and in the White-Blue units the pairs are alternately colored White-Blue and

White-White Blue. The added White in the Green, Red or Blue conductor is used to indicate different lengths of pair twist.

CA-744 CABLES

W-G = White-Green W-R = White Red
W-B = White-Blue = Blue Red Tracer Pair
Numbers are total pairs including tracer pair where indicated



2.07 **CA-600 and CA-601 Cables.** These are layer type textile insulated cables having 19-gauge color code conductors. The conductors of CA-600 cables are tinned while those of CA-601 cables are tinned and enameled. The colors of insulation are given in Paragraph 2.05. They are available in 11, 16, 21, 26 and 51-pair sizes.

3. QUADDED CONDUCTOR CABLES

3.01 **CA-602 Cable.** This is 19-gauge cable with tinned copper wires stranded into pairs and then into quads. It is available in 7, 12, 19, 27, 37, 52, 75, 108 and 154-quad sizes. Adjacent quads in each layer are distinctively colored in accordance with the color combinations shown in the example in Paragraph 3.03.

3.02 **CA-603 Cable.** This is similar to the CA-602 cable except that the wires are tinned and enameled. It is intended for use where a higher degree of insulation resistance is required than can be obtained with non-enameled wire.

3.03 The following shows the layup of a typical CA-603 Lead Covered Textile Insulated Cable containing 52 quads, 19 gauge.

ARRANGEMENT OF CORE

52 QUADS

Center 1 Qd.	1st. Layer 4 Qds.	2nd. Layer 10 Qds.	3rd. Layer 16 Qds.	4th. Layer 21 Qds.
1 52	2 48	1 38	1 22	2 1
	3 49	2 39	2 23	3 2
	4 50	3 40	3 24	4 3
	5 51	4 41	4 25	5 4
		5 42	5 26	1 5
		1 43	1 27	2 6
		2 44	2 28	3 7
		3 45	3 29	4 8
		4 46	4 30	5 9
		5 47	5 31	1 10
			1 32	2 11
			2 33	3 12
			3 34	4 13
			4 35	5 14
			1 36	1 15
			5 37	2 16
				3 17
				4 18
				5 19
				2 20
				1 21

Each Quad is represented by a square.
Numerals at right of squares indicate numbering provided for the splicer's use in segregating layers and boarding.
Numerals at left of squares indicate types of quad.

Type	Pair 1		Pair 2	
	Wire	Mate	Wire	Mate
1	Blue	Blue-White	Orange	Orange-White
2	Green	Green-Red	Brown	Brown-Red
3	Blue-Green	Blue-Green-White	Blue-Brown	Blue-Brown-White
4	Blue-Slate	Blue-Slate-Red	Orange-Green	Orange-Green-Red
5	Slate	Slate-Black	Blue-Orange	Blue-Orange-Black

Insulation - Double Silk and Double Cotton.