

# HOOK-UP WIRE

## PVC INSULATION

MIL-W-16878E TYPE B  
105°C, 600 VOLT

### CHARACTERISTICS

**OPERATING TEMPERATURE:**

- -55°C to 105°C

**VOLTAGE RATING:**

- 600 Volt

**PRODUCT DESCRIPTION:**

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded PVC

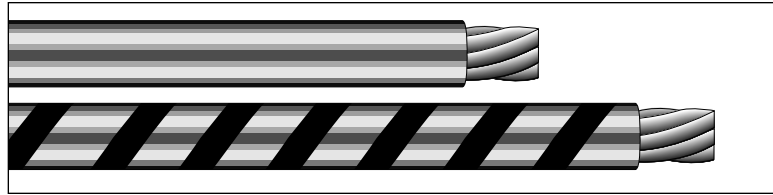
### SPECIFICATIONS

- MIL-W-16878E Type B



### AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups



Alpha Part No.	Type Designation	Conductor AWG	Strand	Insul. Thickness		Diameter		Stock Colors*
				Inches	mm	Inches	mm	
1850	B-32	32	7/40	0.010	0,25	0.028	0,71	1-6
1851†	B-30	30	7/38	0.010	0,25	0.032	0,81	1-6
1852†	B-28	28	7/36	0.010	0,25	0.034	0,86	1-10
1853†	B-26	26	7/34	0.010	0,25	0.038	0,96	1-19
1854†	B-24	24	7/32	0.010	0,25	0.043	1,09	1-19
1854/19	B-24	24	19/36	0.010	0,25	0.043	1,09	1-19
1855†	B-22	22	7/30	0.010	0,25	0.050	1,27	1-19
1855/19	B-22	22	19/34	0.010	0,25	0.050	1,27	1-19
1856†	B-20	20	7/28	0.010	0,25	0.058	1,47	1-19
1856/19	B-20	20	19/32	0.010	0,25	0.058	1,47	1-19
1857	B-18	18	7/26	0.010	0,25	0.068	1,73	1-19
1857/19	B-18	18	19/30	0.010	0,25	0.068	1,73	1-19
1858/19	B-16	16	19/29	0.010	0,25	0.077	1,96	1-19
1859/19	B-14	14	19/27	0.010	0,25	0.091	2,31	1-10

† Also meets MIL-W-76B Type LW  
\*See color chart below

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UL 1015, CSA TEW-105  
105°C, 600 VOLT

## PVC INSULATION

### CHARACTERISTICS

**OPERATING TEMPERATURE:**

- -20°C to 105°C

**VOLTAGE RATING:**

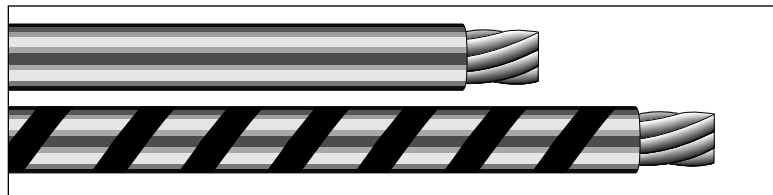
- 600 Volt

**PRODUCT DESCRIPTION:**

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded PVC

### SPECIFICATIONS

- UL AWM Style 1015
- CSA TEW-105



Alpha Part No.	Conductor AWG	Strand	Insul. Thickness		Diameter		Stock Colors*
			Inches	mm	Inches	mm	
3070	24	7/32	0.032	0,81	0.088	2,24	1-10+28
3071	22	7/30	0.032	0,81	0.094	2,38	1-10+28,29
3073	20	10/30	0.032	0,81	0.100	2,54	1-10+28
3075	18	16/30	0.032	0,81	0.112	2,85	1-10+28,29
3077	16	26/30	0.032	0,81	0.124	3,14	1-10+28,29
3079	14	41/30	0.032	0,81	0.134	3,61	1-10+28,29
3080	12	65/30	0.032	0,81	0.162	3,93	1-4
3081	10	105/30	0.032	0,81	0.180	4,83	1-4

\*See color chart below

### AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups

#### \*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray	11-White/Black	13-White/Green	15-White/Blue	17-White/Orange	19-White/Violet	29-Yellow/Green
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)	12-White/Red	14-White/Yellow	16-White/Brown	18-White/Gray	28-Green/Yellow	30-Pink

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MIL-W-16878E TYPE B: 105°C, 600 VOLT  
 UL 1429, CSA: 80°C, 150 VOLT  
 MIL-W-16878E TYPE C: 105°C, 1000 VOLT  
 UL 1430, CSA: 105°C, 300 VOLT

# HOOK-UP WIRE

## IRRADIATED PVC INSULATION

### SOLDER IRON RESISTANT

Irradiated PVC Insulated Hook-Up Wire is exposed to controlled electron beam radiation which results in an insulation far superior to ordinary PVC.

Irradiated PVC withstands higher temperatures than ordinary PVC. Because of its ability to resist solder iron heat, it is the ideal material to use where high reliability is essential and particularly valuable in the wiring of tight, high-density systems.

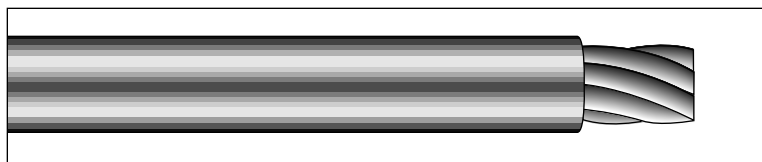
Irradiated PVC insulation is tougher than ordinary PVC resulting in greatly improved abrasion and cut-through resistance.



MIL-W-16878E TYPE B: 105°C, 600 VOLT  
 CSA AWM I A/B FT1: 105°C, 150 VOLT  
 UL 1429: 80°C, 150 VOLT

Alpha Part No.	Conductor AWG	Strand	Insul. Thickness		Diameter		Stock Colors*
			Inches	mm	Inches	mm	
7053	26	7/34	0.010	0,25	0.040	1,02	1-10
7054	24	7/32	0.010	0,25	0.045	1,14	1-10
7054/19	24	19/36	0.010	0,25	0.045	1,14	1-10
7055	22	7/30	0.010	0,25	0.051	1,30	1-10
7055/19	22	19/34	0.010	0,25	0.052	1,32	1-10
7056	20	7/28	0.010	0,25	0.059	1,50	1-10
7056/19	20	19/32	0.010	0,25	0.060	1,52	1-10
7057	18	7/26	0.010	0,25	0.070	1,78	1-10
7057/19	18	19/30	0.010	0,25	0.070	1,78	1-10
7058/19	16	19/29	0.010	0,25	0.078	1,98	1-10

\*See color chart below



MIL-W-16878E TYPE C: 105°C, 1000 VOLT  
 UL 1430, CSA REW XLPVC: 105°C, 300 VOLT

Alpha Part No.	Conductor AWG	Strand	Insul. Thickness		Diameter		Stock Colors*
			Inches	mm	Inches	mm	
7130	24	7/32	0.016	0,41	0.056	1,42	1-10,29
7131	22	7/30	0.016	0,41	0.062	1,58	1-10
7132	20	7/28	0.016	0,41	0.070	1,78	1-10
7133	18	7/26	0.016	0,41	0.082	2,08	1-10,29
7134	16	19/29	0.016	0,41	0.092	2,34	1-10,29
7035†	14	19/27	0.016	0,41	0.107	2,72	1-10,29
7036†	12	19/25	0.016	0,41	0.124	3,15	1-10,29

† UL 3317

\*See color chart below

### CHARACTERISTICS

#### OPERATING TEMPERATURE:

- -55°C to 105°C – UL AWM 1430
- -55°C to 105°C – UL AWM 3317
- -55°C to 105°C – CSA AWM I A/B FT1
- -55°C to 105°C – MIL-W-16878E
- -55°C to 80°C – UL AWM 1429

#### VOLTAGE RATING:

- 600 Volt (MIL), 150 Volt (UL, CSA)
- 1000 Volt (MIL), 300 Volt (UL, CSA)

#### PRODUCT DESCRIPTION:

- Conductor: Stranded Tinned Copper
- Insulation: Color-Coded, Irradiated PVC (XLPVC)

### SPECIFICATIONS

- UL AWM Style 1429
- UL AWM Style 1430
- UL AWM Style 3317
- CSA AWM I A/B FT1
- CSA REW XLPVC FT1
- MIL-W-16878E, Type B
- MIL-W-16878E, Type C

Recognized Component Underwriters Laboratories Inc. Passes UL VW-1 Flame Test Underwriters Laboratories Inc. Certified Canadian Standards Association

### AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups

#### \*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray	29-Yellow/Green
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)	

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# HOOK-UP WIRE

## TFE TEFLON® INSULATION

MIL-W-16878E (TYPE E)††  
UL 1213  
200°C, 600 VOLT

### CERTIFIED PERFORMANCE - HIGH-RELIABILITY TFE TEFLON® INSULATION

Alpha's TFE Teflon wire family includes a full range of sizes, colors, conductor types and voltage ratings for both commercial (UL styles) and high reliability military OEM products.

Alpha's TFE Teflon is rated for continuous operation in temperatures from -60°C to 200°C and retains its exceptional toughness and flexibility within this range. TFE Teflon is not degraded by chemicals which makes it ideal for use in harsh environments. Teflon is widely regarded as the ultimate high performance wire insulation material for environments characterized by extreme thermal or chemical conditions.

### CHOOSE TFE TEFLON® FOR:

- Resistance To All Chemicals
- High Temperature Use Up To 200°C
- Low Coefficient of Friction
- Outstanding Electrical Properties

### TFE TEFLON® APPLICATIONS:

- Military Harnessing
- Medical Electronics
- Power Supply Lead Wire
- Appliance Wiring

### CHARACTERISTICS

#### OPERATING TEMPERATURE:

- -60°C to 200°C (UL 105°C)

#### VOLTAGE RATING:

- 600 Volt (UL: Voltage Not Specified)

#### PRODUCT DESCRIPTION:

- Conductor: Stranded or Solid Silver-Plated Copper
- Insulation: Color-Coded, Extruded TFE Teflon

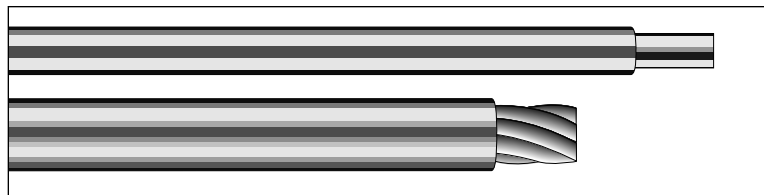
### SPECIFICATIONS

- UL AWM Style 1213
- MIL-W-16878E Type E



### AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups  
1000 ft put-ups may contain multiple lengths



### STRANDED CONDUCTOR

Alpha Part No.	Type Designation	Conductor AWG	Strand	Insul. Thickness Inches	mm	Diameter Inches	mm	Stock Color*
5851	E-30	30	7/38	0.010	0,25	0.032	0,81	1-10
5852	E-28	28	7/36	0.010	0,25	0.036	0,91	1-10
5853	E-26	26	7/34	0.010	0,25	0.040	1,02	1-10
5853/19	E-26	26	19/38	0.010	0,25	0.041	1,04	1-10
5854	E-24	24	19/36	0.010	0,25	0.045	1,14	1-10
5854/7	E-24	24	7/32	0.010	0,25	0.044	1,12	1-10
5855	E-22	22	19/34	0.010	0,25	0.051	1,30	1-10
5855/7	E-22	22	7/30	0.010	0,25	0.055	1,27	1-10
5856	E-20	20	19/32	0.010	0,25	0.059	1,50	1-10
5856/7	E-20	20	7/28	0.010	0,25	0.058	1,47	1-10
5857	E-18	18	19/30	0.010	0,25	0.070	1,78	1-10
5858	E-16	16	19/29	0.010	0,25	0.077	1,96	1-10
5859†	E-14	14	19/27	0.012	0,30	0.094	2,39	1
5859/12†	E-12	12	19/25	0.012	0,30	0.113	2,87	1
5859/10†	E-10	10	37/26	0.012	0,30	0.134	3,40	1

\*See color chart below

### SOLID CONDUCTOR

Alpha Part No.	Conductor AWG	Insul. Thickness Inches	mm	Diameter Inches	mm	Stock Color*
2853/1	26	0.010	0,25	0.036	0,91	1-10
2854/1	24	0.010	0,25	0.040	1,02	1-10
2855/1	22	0.010	0,25	0.045	1,14	1-10
2856/1	20	0.010	0,25	0.052	1,32	1-3
2857/1	18	0.010	0,25	0.060	1,52	1-3

\*See color chart below

†Not UL AWM Style 1213

††All product supplied is to the MIL-W-16878 E revision. Revision F product can be supplied upon request, subject to minimum order quantity and lead time requirements.

Teflon® is a registered trademark of E.I. DuPont

#### \*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)



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MIL-W-16878E (TYPE EE)<sup>††</sup>  
 UL 1180  
 200°C, 1000 VOLT

# HOOK-UP WIRE

## TFE TEFLON® INSULATION

### CERTIFIED PERFORMANCE - HIGH-RELIABILITY TFE TEFLON® INSULATION

Alpha's TFE Teflon wire family includes a full range of sizes, colors, conductor types and voltage ratings for both commercial (UL styles) and high reliability military OEM products.

Alpha's TFE Teflon is rated for continuous operation in temperatures from -60°C to 200°C and retains its exceptional toughness and flexibility within this range. TFE Teflon is not degraded by chemicals which makes it ideal for use in harsh environments. Teflon is widely regarded as the ultimate high performance wire insulation material for environments characterized by extreme thermal or chemical conditions.



Alpha Part No.	Type Designation	Conductor AWG	Strand	Insul. Thickness		Diameter		Stock Color*
				Inches	mm	Inches	mm	
5874	EE-24	24	19/36	0.014	0,35	0.052	1,32	1-10
5875	EE-22	22	19/34	0.014	0,35	0.059	1,49	1-10
5876	EE-20	20	19/32	0.014	0,35	0.067	1,70	1-10
5877	EE-18	18	19/30	0.014	0,35	0.078	1,98	1-10
5878	EE-16	16	19/29	0.014	0,35	0.086	2,18	1
5879	EE-14	14	19/27	0.017	0,43	0.105	2,67	1
5879/12	EE-12	12	19/25	0.017	0,43	0.124	3,15	1
5879/10	EE-10	10	37/26	0.017	0,43	0.146	3,70	1
5879/8†	EE-8	8	133/29	0.020	0,50	0.206	5,23	1

### CHOOSE TFE TEFLON® FOR:

- Resistance To All Chemicals
- High Temperature Use Up To 200°C
- Low Coefficient of Friction
- Outstanding Electrical Properties

### TFE TEFLON® APPLICATIONS:

- Military Harnessing
- Medical Electronics
- Power Supply Lead Wire
- Appliance Wiring

### CHARACTERISTICS

#### OPERATING TEMPERATURE:

- -60°C to 200°C

#### VOLTAGE RATING:

- 1000 Volt (MIL), 300 Volt (UL)

#### PRODUCT DESCRIPTION:

- Conductor: Stranded Silver-Plated Copper
- Insulation: Color-Coded, Extruded TFE Teflon

### SPECIFICATIONS

- UL AWM Style 1180
- MIL-W-16878E Type EE

 **Recognized Component**  
 Underwriters Laboratories Inc.

 **Passes UL VW-1 Flame Test**  
 Underwriters Laboratories Inc.

### AVAILABILITY

- 100 ft (30,5m), 1000 ft (305m) put-ups  
 1000 ft put-ups may contain multiple lengths

\*See color chart below

†Not UL AWM 1180 – AWM 1180 requires that 18AWG thru 10AWG have a temperature marker.

††All product supplied is to the MIL-W-16878 E revision. Revision F product can be supplied upon request, subject to minimum order quantity and lead time requirements.

Teflon® is a registered trademark of E.I. DuPont



#### \*STOCK COLOR CHART

1-White	3-Red	5-Yellow	7-Brown	9-Gray
2-Black	4-Green	6-Blue	8-Orange	10-Violet (purple)

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