

# Customer Specification

## PART NO. 5450/12

### Construction

						Diameters (In)	
1) Component 1						12 X 1 COND	
a) Conductor						14 (41/30) AWG Tinned Copper	0.073
b) Insulation						0.032" Wall, Nom. PVC	0.137
(1) Color Code						Alpha Wire Color Code E	
Cond	Color	Cond	Color	Cond	Color		
1	BLACK	5	YELLOW	9	SLATE		
2	BROWN	6	GREEN	10	WHITE		
3	RED	7	BLUE	11	WHITE/BLACK		
4	ORANGE	8	VIOLET	12	WHITE/BROWN		
2) Cable Assembly						12 Components Cabled	
a) Twists:						1.4 Twists/foot (min)	
b) Orientation:						Components to be arranged from INSIDE LAYER to OUTSIDE LAYER	
c) Core Wrap						Nonwoven Polyester Tape, 20% Overlap, Min.	
3) Shield:						Alum/Mylar Tape, 20% Overlap, Min.	
a) Foil Direction						Foil Facing In	
b) Drain Wire						14 (41/30) AWG Tinned Copper	
4) Jacket						0.063" Wall, Nom.,PVC	0.703 (0.733 Max.)
a) Color(s)						Slate, Black, Yellow, Orange, Blue, Green, Red, Sand Beige, White	
b) Ripcord						1 End 810 Denier Nylon	
c) Print						ALPHA WIRE-* P/N 5450/12 12C 14 AWG XTRAGUARD(R) 1 (UL) MTW 600V OR AWM 2501 105C 600V OR AWM 20811 105C 600V VW-1 OR CRU AWM I/II A/B 105C 600V FT4 CE ROHS SUNLIGHT RESISTANT OIL RESISTANT (SEQ FOOTAGE) * = Factory Code	

### Applicable Specifications

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1) UL		
a) Component 1	AWM/STYLE 1015	105°C / 600 V <sub>RMS</sub>
	MTW	90°C Dry / 60°C Wet / 600 V <sub>RMS</sub>
b) Overall	MTW	90°C Dry / 60°C Wet / 600 V <sub>RMS</sub>
	AWM/STYLE 20811	105°C / 600 V <sub>RMS</sub>
	AWM/STYLE 2501	105°C / 600 V <sub>RMS</sub>
	VW-1	
2) CSA International		
a) Component 1	TEW	105°C / 600 V <sub>RMS</sub>
b) Overall	C(RU) AWM I/II A/B	105°C / 600 V <sub>RMS</sub>
	FT4	
3) IEC	EN 60332-1 Flame Behavior	
	EN 60332-2 Flame Behavior	
4) Other	Sunlight Resistant	
	Oil Resistant	
5) CE:	EU Low Voltage Directive 2014/35/EU	

## Environmental

1) CE: EU Directive 2011/65/EU(RoHS2), EU Directive 2015/863/EU (RoHS3):	
	This product complies with European Directive 2011/65/EU (RoHS Directive) of the European Parliament and of the Council of 8 June 2011 and the amending Directive 2015/863/EU of 4 June 2015 . No Exemptions are required for RoHS Compliance on this item.
2) REACH Regulation (EC 1907/2006):	
	This product does not contain Substances of Very High Concern (SVHC) listed on the European Union's REACH candidate list in excess of 0.1% mass of the item.
3) California Proposition 65:	
	This product may contain substances known to the State of California to cause Cancer or Reproductive Harm, but is exempt from labeling based on the Consent Judgement. See the Alpha Wire website for more information.

## Properties

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<b>Physical &amp; Mechanical Properties</b>	
1) Temperature Range	-30 to 105°C
2) Bend Radius	10X Cable Diameter
3) Pull Tension	419 Lbs, Maximum
4) Sunlight Resistance	Yes
<b>Electrical Properties</b>	
(For Engineering purposes only)	
1) Voltage Rating	600 V <sub>RMS</sub>
2) Capacitance	41 pF/ft @1 kHz, Nominal Conductor to Conductor
3) Ground Capacitance	74 pF/ft @1 kHz, Nominal
4) Inductance	0.19 μH/ft, Nominal
5) Conductor DCR	2.8 Ω/1000ft @20°C, Nominal
6) OA Shield DCR	2.4 Ω/1000ft @20°C, Nominal

## Other

<b>Packaging</b>	Flange x Traverse x Barrel (inches)
a) 1000 FT	36 x 14 x 12 Continuous length
b) 500 FT	24 x 14 x 12 Continuous length
c) 100 FT	18 x 9 x 8 Continuous length
d) Bulk(Made-to-order)	
	<i>[Spool dimensions may vary slightly]</i>
<b>Notes:</b>	
a) Sunlight Resistant Jacket (720hr test).	
b) Oil Resistant Jacket (7d @ 60C).	

[www.alphawire.com](http://www.alphawire.com)

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# EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: 5450/12

5450/12, RoHS-Compliant Commencing With 8/1/2005 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above, including all packaging materials, is manufactured in accordance with Directive 2011/65/EU of the European Parliament, better known as the RoHS Directive (commonly known as RoHS 2), with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. This certification extends to amending Directive 2015/863/EU which expanded the list of restricted substances to 10 items (commonly known as RoHS 3). This product also complies with UK - RoHS. The reader is referred to these Directives for the specific definitions and extents of the Directives. **No Exemptions are required for RoHS Compliance on this item.** Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control of Pollution by Electronic Information Products" standard SJ/T 11364-2014. This product is also in compliance with China RoHS 2 per GB/T 26572-2011.

## Substance

Substance	Maximum Control Value
Lead	0.1% by weight (1000 ppm)
Mercury	0.1% by weight (1000 ppm)
Cadmium	0.01% by weight (100 ppm)
Hexavalent Chromium	0.1% by weight (1000 ppm)
Polybrominated Biphenyls (PBB)	0.1% by weight (1000 ppm)
Polybrominated Diphenyl Ethers (PBDE) , Including Deca-BDE	0.1% by weight (1000 ppm)
Bis(2-ethylhexyl) phthalate (DEHP)	0.1% by weight (1000 ppm)
Butyl benzyl phthalate (BBP)	0.1% by weight (1000 ppm)
Dibutyl phthalate (DBP)	0.1% by weight (1000 ppm)
Diisobutyl phthalate (DIBP)	0.1% by weight (1000 ppm)

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Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering 4/1/2025

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