Alpha Wire | 711 Lidgerwood Avenue, Elizabeth, NJ 07207
Tel: 1-800-52 ALPHA (25742), Web: www.alphawire.com

Request a Sample

Customer Specification

PART NO. FIT-221-4IN

Construction

1) Tubing Type	Heat Shrinkable Tubing
2) Tubing Material	Cross Linked Polyolefin
3) Minimum Supplied ID(In)	4.000
4) Maximum Recovered ID (In)	2.000
5) Nominal Recovered Wall Thickness(In)	0.055
6) Color(s)	BLACK, CLEAR

Applicable Specifications

1) UL	Standard 224 (Except Clear) 600V	
2) CSA International	Standard 198 (Except Clear) 600V	
3) Other	AMS-DTL-23053/5 Class 1 (Except Clear)	
	AMS-DTL-23053/5 Class 2 (Clear Only)	

Environmental

1) EU Directive 2011/65/EU(RoHS2):	
	All materials used in the manufacture of this part are in compliance with European Directive 2011/65/EU regarding the restriction of use of certain hazardous substances in electrical and electronic equipment. Consult Alpha Wire's web site for RoHS C of C.
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. For up-to-date information, please see Alpha's REACH SVHC Declaration.
3) California Proposition 65:	The outer surface materials used in the manufacture of this part meet the requirements of California Proposition 65.

Properties

Physical & Mechanical Properties		
1) Temperature Range	-55 to 135°C	
2) Shrink Ratio	Approximately 2:1	
3) Full Recovery Temperature	121°C	
4) Minimum Shrink Temperature	90°C	
5) Tensile Strength	1500psi, Min	ASTM D638
6) Elongation	200%, Min	ASTM D638
7) Low Temperature Flex(-55°C)	no cracking	AMS-DTL-23053
8) Heat Shock(250°C,4hrs)	no cracking	AMS-DTL-23053
9) Secant Modulus	$2.5x10^{4}$ psi, Min	ASTM D882
10) Longitudinal Change	+/-5%	AMS-DTL-23053
11) Specific Gravity(Colors)	1.35, Max	ASTM D792
Specific Gravity(Clear)	1.00, Max	
12) Shelf Life	5 Years @ 18 to 35°C	
Electrical Properties		
1) Dielectric Strength	500 V/mil, Min	ASTM D876
2) Volume Resistivity	$1x10^{14}$ ohm-cm, Min	ASTM D876
Chemical Properties		
1) Water Absorption	0.50%, Max	ASTM D570
2) Corrosion(0°C,16hrs)	no corrosion	AMS-DTL-23053
3) Fluid Resistance(23°C,24 Hrs)	1000 PSI, Min	AMS-DTL-23053
4) Fungus Resistance	Pass	AMS-DTL-23053
5) Vacuum Outgassing - CVCM	0.10%, Max	ASTM E595
6) Halogen Free	No	
7) Lead Free	Yes	

Other

Packaging	
1) 250X4 FT	FIT 4X4: 4 x 4 x 49 Continuous length
2) 50 FT	CR6.5-4: 6.5 x 4 x 3.25 Max. 2 pieces/Min length 13 FT.
3) 2X4 FT	FIT 3X3: 3.25 x 3.25 x 49 Continuous length
Notes	
1) Orange available for 1/2 - 150 ft, 3/4 - 250 ft, 1IN - 250 ft, 11/2IN - 125Ft and 2IN - 125 ft sizes.	

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EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: FIT-221-4IN

FIT-221-4IN , RoHS-Compliant Commencing With 12/1/2004 Production

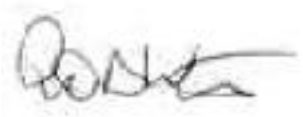
Note: all colors and put-ups

This document certifies that the Alpha part number cited above 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) 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.

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 & QA 1/22/2019

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