

Customer Specification

PART NO. FIT-221V-2IN

Construction

| | |
|---|--|
| 1) Tubing Type | Heat Shrinkable Tubing |
| 2) Tubing Material | Cross Linked Polyolefin |
| 3) Minimum Supplied ID(In) | 2.000 |
| 4) Maximum Recovered ID (In) | 1.000 |
| 5) Nominal Recovered Wall Thickness(In) | 0.045 |
| 6) Color(s) | BLACK, WHITE, RED, YELLOW, BLUE, GREEN |

Applicable Specifications

| | | |
|----------------------|-----------------------------|--|
| 1) UL | VW-1 | |
| | Standard 224 | |
| 2) CSA International | Standard 198 | |
| 3) Other | AMS-DTL-23053/5 Class 1 & 3 | |

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 Resistance(175°C,168hrs) | 100% Elongation, Min | ASTM D638 |
| 9) Heat Shock(250°C,4hrs) | no cracking | AMS-DTL-23053 |
| 10) Secant Modulus | 2.5x10 ⁴ psi, Min | ASTM D882 |
| 11) Longitudinal Change | +/-5% | AMS-DTL-23053 |
| 12) Specific Gravity(Colors) | 1.35, Max | ASTM D792 |
| Specific Gravity(Clear) | 1.00, Max | |
| 13) 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(175°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 |
|------------------------|
| 125 FT, 5X4 FT, 3X6 IN |

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EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: FIT-221V-2IN

FIT-221V-2IN, RoHS-Compliant Commencing With 01/12/2004 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 Union (RoHS 2), with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. This document also certifies that the listed part number is in compliance with 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 requirements. **Compliance on this item.** Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control" requirements.

Substance

Lead
Mercury
Cadmium
Hexavalent Chromium
Polybrominated Biphenyls (PBB)
Polybrominated Diphenyl Ethers (PBDE),
Including Deca-BDE
Bis(2-ethylhexyl) phthalate (DEHP)
Butyl benzyl phthalate (BBP)
Dibutyl phthalate (DBP)
Diisobutyl phthalate (DIBP)

Maximum Control Value

0.1% by weight (1000 ppm)
0.1% by weight (1000 ppm)
0.01% by weight (100 ppm)
0.1% by weight (1000 ppm)
0.1% by weight (1000 ppm)
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The information provided in this document and disclosure is correct to the best of Alpha Wire's knowledge, information and belief at the date of this document. This document is intended to provide guidance for the safe handling, storage, and any other operation of the product itself or the one that it will become part of. The intent of this document is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulatory requirements. Alpha Wire is not responsible for determining the applicability of legislation and regulatory requirements. Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering & QA 31/03/2025

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