

Customer Specification

PART NO. GRP-110NF12

Construction

1) Tubing Type	Expandable Sleeving
2) Tubing Material	Braided Polyethelene Terephthalate
3) Minimum Supplied ID(In)	0.250
4) Maximum Expanded ID (In)	0.750
5) Nominal Wall Thickness +/- 0.005(In)	0.024
6) Number of Carriers	64
7) Number of Yarns	3
8) Total Number of Monofilaments	192
9) Color(s)	BLACK OR NATURAL

Applicable Specifications

1) UL	UZKX2	
2) CSA International	5836 01	
3) Military	MIL-I-631	

Environmental

1) EU Directive 2011/65/EU(RoHS2), EU Directive 2015/863/EU (RoHS3):	
	All materials used in the manufacture of this part are in compliance with European Directive 2011/65/EU and the amending Directive 2015/863/EU of 4 June 2015 regarding the restriction of use of certain hazardous substances in electrical and electronic equipment.
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:	Exempt from warning labels based on the Consent Judgment. Please see Alpha's CA Prop 65 Statement for more information.
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Properties

Physical & Mechanical Properties		
1) Temperature Range	-75 to 125°C	
2) Tensile Strength	85000psi, Min	ASTM D638
Electrical Properties		
Chemical Properties		
1) Water Absorption	0.08%, Max	ASTM D570
2) Corrosion(0°C,16hrs)	no corrosion	AMS-DTL-23053
3) Fungus Resistance	Pass	AMS-DTL-23053
4) Halogen Free	Yes	
5) Lead Free	Yes	

Other

Packaging	
1) 500 FT	CR6-10.5: 6 x 10.5 x 3.25 Max. 5 pieces/Min length 20 FT.
2) 100 FT	CR3-15: 3 x 5.625 x 3.25 Max. 2 pieces/Min length 20 FT.

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EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: GRP-110NF12

GRP-110NF12, RoHS-Compliant Commencing With 9/30/2004 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). 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	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)

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 its release. The information provided is designed only as a general guide 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 not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering

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