

# Customer Specification

## PART NO. GRP1102IN

### Construction

1) Tubing Type	Expandable Sleeving
2) Tubing Material	Braided Polyester
3) Minimum Supplied ID(In)	1.500
4) Maximum Expanded ID (In)	3.500
5) Nominal Wall Thickness +/- 0.005(In)	0.025
6) Number of Carriers	120
7) Number of Yarns	4
8) Total Number of Monofilaments	480
9) Color(s)	BLACK OR NATURAL

### Applicable Specifications

1) UL	UZKX2	
2) Military	MIL-I-631	

### Environmental

1) EU Directive 2002/95/EC(RoHS):	All materials used in the manufacture of this part are in compliance with EU Directive 2002/95/EU regarding the restriction of use of certain hazardous substances in electrical and electronic equipment. Consult Alpha Wire's web site for compliance Date of Manufacture.	
2) REACH Regulation (EC 1907/2006):	This product does not contain any of the 16 substances listed on the European Union's REACH Substance of Very High Concern (SVHC) candidate list in excess of 0.1% mass of the item.	
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	-75 to 125°C	
2) Tensile Strength	85000psi, Min	ASTM D638
Electrical Properties		
Chemical Properties		
1) Corrosion(0°C,16hrs)	no corrosion	AMS-DTL-23053
2) Fungus Resistance	Pass	AMS-DTL-23053
3) Halogen Free	Yes	
4) Lead Free	Yes	

### Other

www.alphawire.com

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

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## RoHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number:GRP1102IN

GRP1102IN , RoHS-Compliant Commencing With10/1/2004Production

*This document certifies that the Alpha part numbers cited above are manufactured in accordance with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003, better known as the RoHS Directives, with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. The reader is referred to these Directives for the specific definitions and extents of these Directives. **No Exemptions are required for RoHS Compliance on this item.***

<b>Substance</b>	<b>Maximum Control Value</b>
Lead	0.1% by weight (1000 ppm)
Mercury	0.1% by weight (1000 ppm)
Cadmium	0.1% 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)	0.1% by weight (1000 ppm)
Including Deca-BDE	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 Company:

A handwritten signature in black ink, appearing to read 'Dave Watson'.

Dave Watson, Director of Engineering &QA

1/24/2011