

Customer Specification

PART NO. GRP-160-1/4

Construction

1) Tubing Type	Expandable Sleeving
2) Tubing Material	Heavy Duty Braided Nylon 6-6 polyamide
3) Minimum Supplied ID(In)	0.250
4) Maximum Expanded ID (In)	0.500
5) Nominal Wall Thickness +/- 0.005(In)	0.050
6) Number of Carriers	20
7) Number of Yarns	3
8) Total Number of Monofilaments	60
9) Color(s)	BLACK

Applicable Specifications

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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.

Properties

Physical & Mechanical Properties		
1) Temperature Range	-45 to 150°C	
2) Tensile Strength	19psi, Min	ASTM D638
3) Specific Gravity	1.14, Max	ASTM D792
Electrical Properties		
Chemical Properties		
1) Water Absorption	2.50%, 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) 250 FT	CR10.5-6: 10.5 x 6 x 3.25 Max. 3 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-160-1/4

GRP-160-1/4, RoHS-Compliant Commencing With 9/24/2010 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

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 6/24/2026

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