

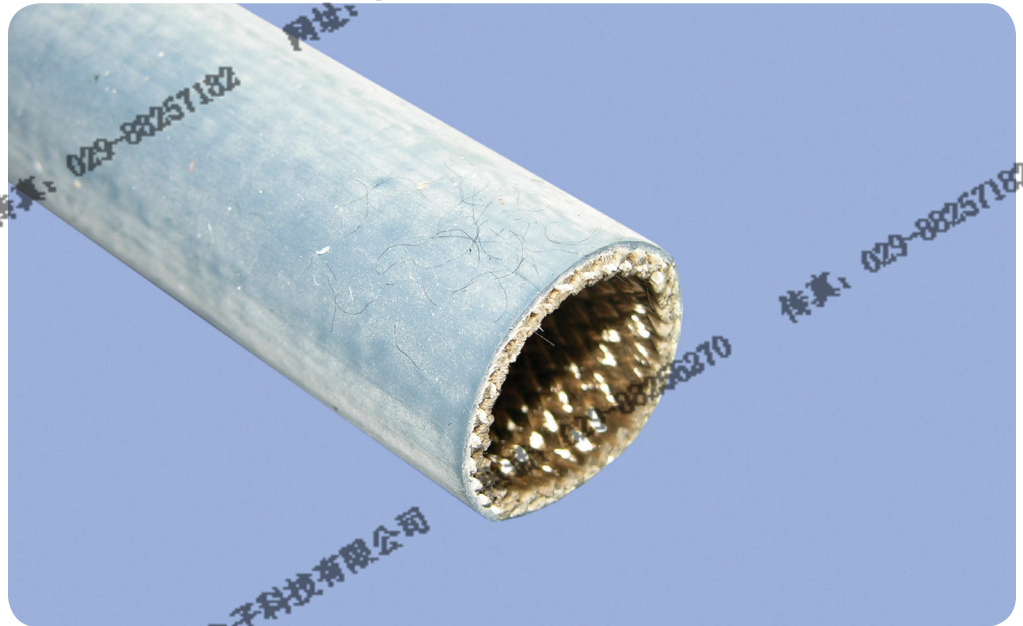


ELECTRICAL INSULATION

Ben-Har™ 1151-FRB Grade A

Product Highlights

- Operating temperature
-70°C to +200°C
(-94°F to +392°F)
Class H
- Grade A (7,000V)
- Meets VW-1
- FAR Part 25
- MIL-I-3190/6
- NEMA 5
- Expands 25% or more
in diameter without
damage
- Available in blue/gray
color only



Ben-Har™ 1151-FRB Grade A is a rugged, flame-retardant, silicone rubber coated sleeving that provides excellent cut-through and abrasion protection for wiring systems in applications with temperatures ranging from -70°C to +200°C. Because the specially formulated silicone rubber is extrusion coated over the non-combustible fiberglass braid, it results in a reinforced sleeving that is superior to ordinary dip-coated sleeving and unreinforced rubber or plastic tubing.

The improved flame-retardant characteristics mean that 1151-FRB Grade A is difficult to ignite, has a very slow rate of burn travel and self-extinguishes promptly - even after bottom ignition of a vertical specimen. 1151-FRB Grade A is used to separate/isolate/insulate critical circuits and conductors, as a thermal barrier for limited periods, as identification marking, or as a wire bundling mechanism. It is ideal for protecting wiring systems in modern jet aircraft against abrasion, impact, harmful drip, splash or spray. Qualified by major U.S. airframe manufacturers, 1151-FRB Grade A meets all of the performance requirements of MIL-I-3190/6.

Ben-Har 1151-FRB Grade A is resistant to hydraulic fluids (including Skydrol LD), jet fuels, inorganic acids, and alkalis. Some swelling occurs in aromatic hydrocarbons and chlorinated solvents.



Our manufacturing sites are
certified ISO 9001, ISO/TS 16949,
or AS/EN 9100, and ISO 14001.

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BentleyHarris®
Protection Products

Performance Data – Ben-Har™ 1151-FRB Grade A

Property	Test Method	Result
Operating temperature range		-70°C to +200°C (-94°F to +392°F)
Hardness, durometer	ASTM D240, Shore A	50 +/- 5
Fungus Resistance	MIL-I-681	No Growth
Smoke Density	ASTM E 662 (4 minutes)	D _s < 70
Dielectric Breakdown	ASTM D149	7 kV Minimum
Flammability	FAR Part 25 (12 seconds, vertical)	Pass

Product Specifications

Commercial Part Number	Recommended Application Range mm (in)		Maximum Weight g/m (lb/ft)	Standard Packaging m (ft)
	Min Ø	Max Ø		
Ben-Har 1151-FR B Grade A 1.7-6	1.6 (0.064)	1.9 (0.074)	8.7 (0.0058)	610 (2000)
Ben-Har 1151-FR B Grade A 2.2-6	2.1 (0.081)	2.3 (0.091)	10.5 (0.0070)	305 (1000)
Ben-Har 1151-FR B Grade A 2.7-6	2.6 (0.102)	2.8 (0.112)	11.1 (0.0075)	305 (1000)
Ben-Har 1151-FR B Grade A 3-6	2.9 (0.114)	3.1 (0.124)	14.1 (0.0095)	305 (1000)
Ben-Har 1151-FR B Grade A 3.4-6	3.3 (0.129)	3.6 (0.141)	15.2 (0.0102)	305 (1000)
Ben-Har 1151-FR B Grade A 3.8-6	3.7 (0.144)	4.0 (0.158)	17.4 (0.0117)	305 (1000)
Ben-Har 1151-FR B Grade A 4.2-6	4.1 (0.162)	4.5 (0.178)	24.1 (0.0162)	152 (500)
Ben-Har 1151-FR B Grade A 4.7-6	4.6 (0.182)	5.0 (0.198)	24.7 (0.0166)	152 (500)
Ben-Har 1151-FR B Grade A 5.3-6	5.2 (0.204)	5.7 (0.224)	28.0 (0.0188)	152 (500)
Ben-Har 1151-FR B Grade A 5.9-6	5.8 (0.229)	6.3 (0.249)	28.8 (0.0194)	152 (500)
Ben-Har 1151-FR B Grade A 6.7-6	6.6 (0.258)	7.1 (0.278)	41.4 (0.0278)	76 (250)
Ben-Har 1151-FR B Grade A 7.5-6	7.3 (0.289)	7.9 (0.311)	58.0 (0.0389)	76 (250)
Ben-Har 1151-FR B Grade A 8.4-6	8.3 (0.325)	8.8 (0.347)	61.9 (0.0416)	76 (250)
Ben-Har 1151-FR B Grade A 10-6	9.5 (0.375)	10.1 (0.399)	63.4 (0.0426)	76 (250)
Ben-Har 1151-FR B Grade A 11-6	11.1 (0.438)	11.7 (0.462)	90.1 (0.0605)	38 (125)
Ben-Har 1151-FR B Grade A 13-6	12.7 (0.500)	13.3 (0.524)	138.5 (0.0930)	38 (125)
Ben-Har 1151-FR B Grade A 16-6	15.9 (0.625)	16.6 (0.655)	149.7 (0.1005)	15 (50)
Ben-Har 1151-FR B Grade A 19-6	19.1 (0.750)	20.0 (0.786)	187.2 (0.1257)	15 (50)
Ben-Har 1151-FR B Grade A 22-6	22.2 (0.875)	23.1 (0.911)	270.3 (0.1815)	15 (50)
Ben-Har 1151-FR B Grade A 25-6	25.4 (1.000)	26.3 (1.036)	301.1 (0.2022)	15 (50)

Part Numbering System

Example	Product Name	Size	Color	Quantity
	Ben-Har 1151-FRB Grade A	4.2	6 (Blue/gray)	152m (500 ft)

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