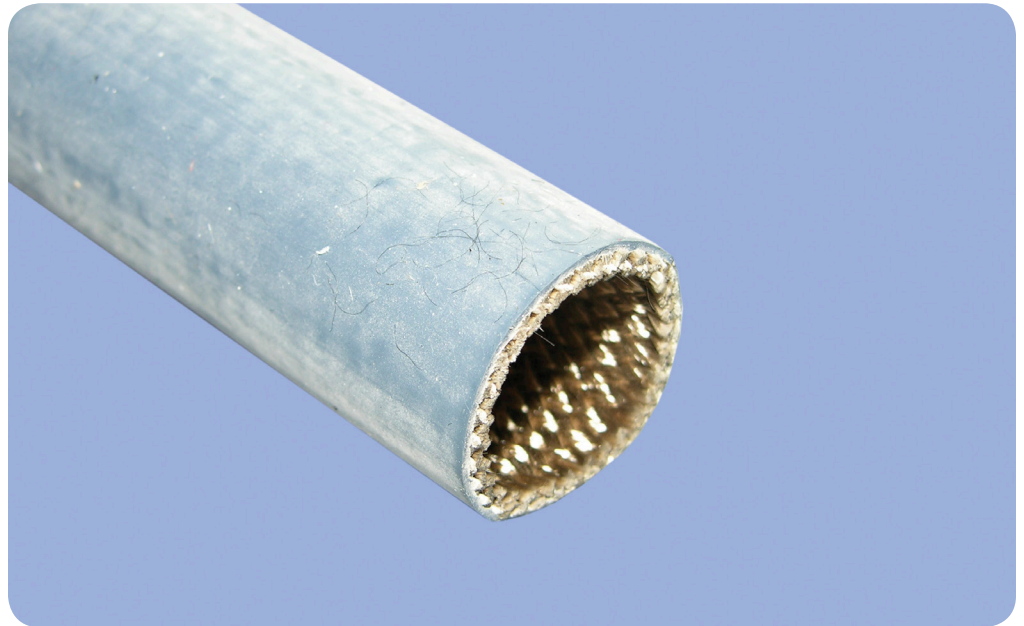


ELECTRICAL INSULATION

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

1151FRB_GA_10092014

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-631 | 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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Japan: (81) 45 479 0201
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