

ELECTRICAL INSULATION

GES

Product Highlights

- Operating temperature from -60°C to +220°C (-76°F to +428°F) (Class H)
- Diametrical expansion 1.3
- Flame resistant
- EN 45545-2
- Zero Halogen
- 4 kV or 10kV dielectric strength

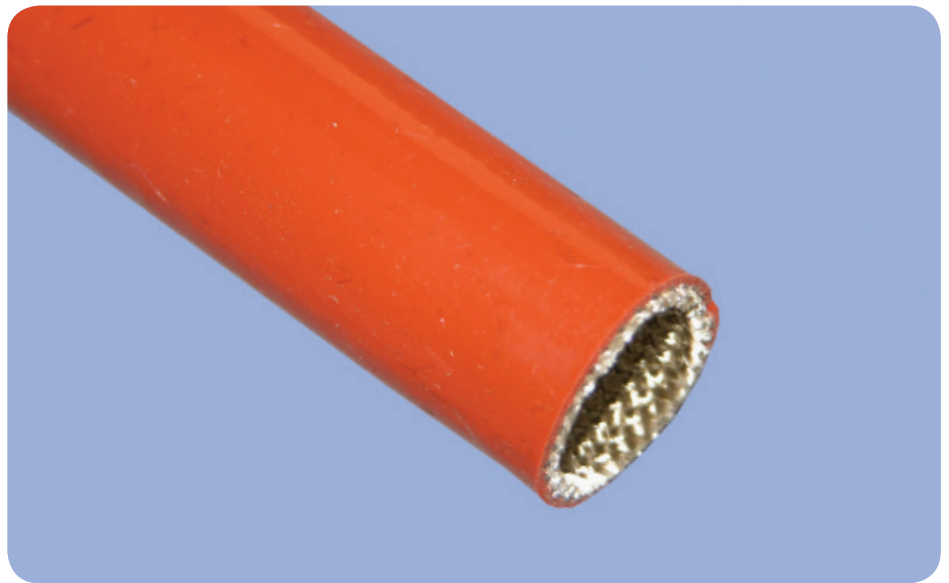
Installation Features

- Very flexible
- Local reinforcement of electrical insulation
- Electrical Cabinet
- Protection of ground shunts



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

GES_07242014



GES is a braided fiberglass sleeve with a silicone rubber coating designed to provide electrical insulation. The thickness of the silicone coating determines the dielectric strength, which ranges from 4 to 10 kV.

The high flexibility of GES allows relative diametrical expansion (approximately 1.3). This product provides electrical insulation for a wide range of industries and applications, including winding, engines and transformer outlets.

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Performance Data – GES

| Property | Test Method | Result |
|----------------------------------|--|---|
| Operating Temperature | MIL standard 1003190C (class +220°C (+428°F)), type D, category C | -60°C (-76°F) to +220°C (+428°F) (continuous) Meets requirement |
| Flame Resistance | UL 1441 (VW1) NF 16.101 - 16.102 DIN 5510-2 & 54837 DIN EN ISO 5659-2 EN 45545-2 | Pass I2-F0 S4, SR2 & ST2 (from sizes 12 to 32) CIT 8 min: 0,024 ; FED 30 min: 0,020 R22 HL3 R23 HL3 |
| Dielectric measurements | NF standard C93.641 | See table below |
| Volume resistivity | | 10 ¹² ohms/cm |
| Resistance to transformer fluids | NF standard C.93641 | Pass |

Electrical Performances

GES is available in 2 versions with the following dielectric strength:

| Description | Dielectric Strength (average value) | Dielectric Strength (minimum) |
|-------------|--|----------------------------------|
| GES 40 | 4.0 kV | 2.5 kV |
| GES 100 | 10.0 kV | 7.0 kV |

Product Specifications

| Internal Diameter (mm) (in) | Diameter Tolerance (mm) | Standard Packaging (m) (ft) | Internal Diameter (mm) (in) | Diameter Tolerance (mm) | Standard Packaging (m) (ft) |
|--------------------------------|----------------------------|--------------------------------|--------------------------------|----------------------------|--------------------------------|
| 0.5 (1/64") | ± 0.2 | 500 (1640) | 9 (23/64") | ± 0.5 | 100 (328) |
| 1.0 (1/32") | ± 0.2 | 500 (1640) | 10 (25/64") | ± 0.5 | 100 (328) |
| 1.5 (1/16") | ± 0.2 | 500 (1640) | 12 (15/32") | ± 0.5 | 100 (328) |
| 2 (5/64") | ± 0.2 | 500 (1640) | 14 (35/64") | ± 0.5 | 100 (328) |
| 2.5 (3/32") | ± 0.2 | 500 (1640) | 16 (5/8") | ± 0.7 | 50 (164) |
| 3 (7/64") | ± 0.2 | 500 (1640) | 18 (23/32") | ± 1.0 | 50 (164) |
| 4 (5/32") | ± 0.2 | 500 (1640) | 20 (51/64") | ± 1.5 | 50 (164) |
| 5 (13/64") | ± 0.3 | 500 (1640) | 22 (7/8") | ± 1.5 | 25 (82) |
| 6 (1/4") | ± 0.3 | 500 (1640) | 25 (63/64") | ± 2.0 | 25 (82) |
| 7 (9/32") | ± 0.3 | 100 (328) | 28* (1-1/8") | ± 2.0 | 25 (82) |
| 8 (5/16") | ± 0.3 | 100 (328) | 32** (1-1/2") | ± 2.0 | 25 (82) |

* Only available in GES 40

** Only available in GES 100

Part Numbering System:

| Example: | Description | Size | Color | Quantity |
|----------|-------------|------|---------------------|--------------|
| | GES 40 | 10 | 12 (red iron oxide) | 100m (328ft) |

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Availability

Bentley-Harris® GES is available in sizes from 0.5 to 32 mm (1/64" to 1-1/2"). The standard color is red iron oxide.

Please consult the factory with needs for special colors, which are available on a minimum order basis.

All numeric data show average or typical values.

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