



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 <sup>12</sup> 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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