

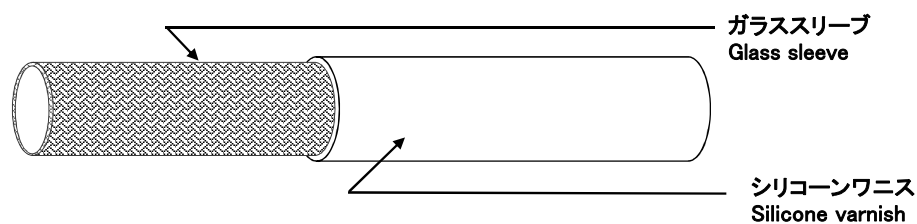
| | |
|-------|-----------|
| 品番 | S-693-600 |
| Model | S-693 F-1 |
| | S-693 F-2 |

特長 Features

1 構造・材質

Structure and material

- ・シリコンワニスガラスチューブはガラス繊維で編組されたガラススリーブに難燃性シリコンワニスを塗布・乾燥したものです。
Silicone varnished glass tubes are made by glass braided sleeving coated with silicone varnish and dring.



2 品質・用途等

Quality and applications

- ・耐熱、耐寒性に優れ、 $-50\sim 180^{\circ}\text{C}$ (H種)の広い温度範囲で安定しており、長時間使用に耐えます。
特にS-693-600は、定格温度 200°C ・定格電圧600Vの規格品であり、高圧絶縁用として使用されています。
Silicone varnished glass tubes can withstanding haigh nad low temperatures and offer stable performance within a wide temperature range from -50°C to 180°C (grade H), allowing longer service. Especially S-693-600 aproved UL standard, rated temperature 200°C , rated voltage 600V, which are used for insulation for high voltage.
- ・耐水性、耐湿性、耐候性が良好です。
Silicone varnished glass tubes have water, moisture and weather resistances.
- ・柔軟性に優れ、加工性が良い。
Silicone varnished glass tubes are highly flexural and workable.
- ・家電熱器具、モーター、変圧器等の絶縁保護用または、熱保護用、配線等結束用として使用されております。
Mainly used electrical insulation, protection against heat and housing for home appliance, motor, transformer etc.

3 標準製品仕様

Typical specifications of products

| グレード Grade | 品番 Model | 絶縁破壊電圧(KV) Dielectric breakdown voltage | | | | ピンホール試験 ^{※1} Pinhole test | 耐熱性 ^{※2} Heat resistance | 難燃性 UL1441 Flame resistance | UL File No. |
|-----------------------------------|-------------|--|---------------|----------------------------|---------------|---------------------------------------|--------------------------------------|-----------------------------------|-------------|
| | | 常態 Ordinary state | | 吸湿後 Moisture absorption | | | | | |
| | | 平均 Average | 最低 Minimum | 平均 Average | 最低 Minimum | | | | |
| 定格200°C 600V Rated 200°C, 600V | S-693-600 | ≥7.0 | ≥5.0 | ≥2.2 | — | 合格 pass | 合格 pass | VW-1 | E72406 |
| 中圧用 Middel Voltage | S-693 F-1 | ≥4.0 | ≥2.5 | ≥2.0 | ≥1.5 | 合格 pass | 合格 pass | VW-1 | E55258 |
| 低圧用 Low voltagte | S-693 F-2 | ≥2.5 | ≥1.5 | — | — | — | 合格 pass | VW-1 | |

ピンホール試験^{※1}

長さ約250mmの試験片をとり、チューブ200mmを2%食塩水に浸漬し、チューブ内側にも2%食塩水を満たす。チューブはできるだけ折り曲げないようにして30分浸漬後、チューブの内外にそれぞれ内・外部電極として金属細線を挿入し、この内・外部電極に50-60Hzの正弦波に近い波形をもつ電圧1000Vを1分間印加し、絶縁破壊しないことを確認する。(電安法『電気用品の技術基準の解説』に準拠)

Pinhole test^{※1}

The pinhole test shall be performed according to the following procedures.

Prepare a test tube sample about 250mm lengthwise, and seal 200mm of the tube into 2% salt water with the inside of the tube filled with salt water as well. With the tube free from bending force, allow it to stand for 30 min. Then, place thin metallic wires, which will be used as internal and external electrodes, inside and outside the tube, and apply 1000V AC whose waveform is similar to that of a 50-60Hz sine wave for 1 min. Check that dielectric breakdown does not occur during the test.

耐熱性^{※2}

250°C/6hr.処理後、室温に冷却し、塗膜の表面にあわ、ふくれがないかを目視にて確認する。更に試験片の内径よりもやや小さい外径の柔軟な丸棒に差し込み、規定された巻きつけ試験棒に沿って180度折り曲げてU字形にし、塗膜にひび、割れ、はがれが生じないかを調べる。但し棒に当たって生ずる側面及び内側のひび、割れ、はがれは無視してよい。(旧JIS C 2411準拠)

Heat resistance^{※2}

Heat test tube for 6 hours in a thermostatic chamber at 250°C, remove it from the chamber and Cool it at room temperature. Examine test pieces free from bubbles, the swell of varnish coated surface visually. Then flexible stick, which outside diameter is bit smaller than inside diameter of test pieces, insert in test piece and bent it by 180° put between mandrel which diameter prescribed JIS C 2411 7.7.1 Examine bent test pieces visually no abnormality on the surface as varnish cracking, coming loose and falling, however, it is negligible that caused of pressed mandrel.

4 寸法
Size

| 公称内径 Nominal inside diameter (mm) | 内径公差 Inside diameter tolerance (mm) | S-693-600 | S-693F-1 | S-693F-2 |
|---|--|-----------------------------------|----------|----------|
| | | 最小肉厚 Minimum thickness (mm) | | |
| 0.8 | +0.2、-0.1 | ≥0.400 | ≥0.40 | ≥0.28 |
| 1.0 | | | | |
| 1.2 | | | | |
| 1.5 | | | | |
| 2.0 | +0.3、-0.15 | ≥0.457 | ≥0.40 | ≥0.28 |
| 2.5 | | | | |
| 3.0 | | | | |
| 3.5 | | | | |
| 4.0 | ±0.5 | ≥0.508 | ≥0.40 | ≥0.35 |
| 5.0 | | | | |
| 6.0 | | | | |
| 8.0 | | | | |
| 10.0 | +1.5、-0.5 | ≥0.635 | ≥0.45 | ≥0.40 |
| 12.0 | | | | |

5 標準仕上げ長さ
Standard finished length

| 公称内径 Nominal inside diameter (mm) | 標準仕上げ長さ Standard finished length (m) | | |
|---|--|-----------|-----------|
| | S-693-600 | S-693 F-1 | S-693 F-2 |
| 0.8 | 100 | 100 | 100 |
| 1.0 | | | |
| 1.2 | | | |
| 1.5 | | | |
| 2.0 | | | |
| 2.5 | | | |
| 3.0 | 50 | 50 | 50 |
| 3.5 | | | |
| 4.0 | | | |
| 5.0 | | | |
| 6.0 | 25 | 25 | 25 |
| 8.0 | | | |
| 10.0 | | | |
| 12.0 | | | |

※上記長さ以外に1Mのカット仕上げも可能です。

It is possible to finish in 1m length tube cut.

・上記以外のサイズにも一部カスタム生産を承っております。ご要望の仕様がありましたらご相談願います。

We do not supply only the above inside diameter but also some customize size. If you have some request for specifications, please ask our sales person in charge.