



# La MISOLET

## Working Of Electric And Thermo Insulating Materials

CNC machining by customers' drawing

Blanked findings

Direct selling

Sheets and panels – Rods – Tubes made of:

Bakelized Cloth and Bakelized Paper

Epoxy Glass Nema G10 and G11,

Silicone Nema G7 and Melamine Nema G5

Polyester Glass GPO3

Thermo Insulating Materials – Mica and Micanite

TOOLING, BLANKING AND DIEMAKING

## DATA SHEET

Laminate:

**LG11H**

**Description:** Glass cloth and epoxy resin binder laminate for high temperatures

| According to specifications | CEI 15/10    | EV         | Unit | Average values | Test method | Test conditions |
|-----------------------------|--------------|------------|------|----------------|-------------|-----------------|
|                             | CEI EN 60893 | EP GC 308  |      |                |             |                 |
|                             | DIN 7735     | Hgw 2372.4 |      |                |             |                 |
|                             | NEMA LI - 1  | G11        |      |                |             |                 |

| Physical properties     | Colour                                      | translucid natural  |                   |              |          |
|-------------------------|---|---------------------|-------------------|--------------|----------|
|                         |   | Specific gravity    | g/cm <sup>3</sup> | 1,9          | ISO 1183 |
|                         | Water absorption mm 3                       | mg                  | 22                | IEC 60893-2  | b + d    |
|                         | Thermal classification                      | °C                  | H (180°C)         | IEC 60216    | -        |
|                         | Self extinguishing                          |                     | -                 | UL 94        | -        |
|                         | Thermal conductivity                        | W/mK                | 0,3               | ISO 8302     | -        |
|                         | Expansion coefficient                       | 10 <sup>-6</sup> /K | 15                | VDE 0304/VSM | -        |
|                         | Silicone resin content                      | %                   | -                 | IEC 371-2    | -        |
|                         | Mica content                                | %                   | -                 | IEC 371-2    | -        |
| Mechanical properties   | Flexural strength ⊥                         | MPa                 | 340               | ISO 178      | a        |
|                         | Charpy impact strength //                   | KJ/m <sup>2</sup>   | 33                | ISO 179      | a        |
|                         | Tensile strength                            | MPa                 | 300               | ISO 527      | a        |
|                         | Compressive strength ⊥                      | MPa                 | -                 | ISO 604      | -        |
|                         | Bonding strength //                         | N                   | 8000              | CEI          | a        |
|                         | Modulus of elasticity                       | MPa                 | 24000             | ISO 178      | a        |
| Dielectrical properties | Insulation resistance                       | MΩ                  | 3x10 <sup>4</sup> | ISO 60167    | d        |
|                         | Dielectric strength // to lamination        | KV                  | 35                | ISO 60243-1  | e        |
|                         | Dielectric strength ⊥ to lamination         | KV/mm               | 14,2              | ISO 60243-1  | e        |
|                         | Tracking resi stance                        | V                   | 180               | IEC 60112    | a        |
|                         | Arc resistance                              | S                   | -                 | ASTM D495    | -        |
|                         | Dissipation factor at 1 MHz                 |                     | 0,04              | IEC 60250    | d        |
|                         | Dielectric constant (permittivity) at 1 MHz |                     | 5                 | IEC 60250    | d        |

The values shown above are indicative as they represent the average values observed during our routine control tests.

The user must make sure that the product he requests is compatible with the use to which it is destined.

### Test condition:

**a)** 48h 15-35°C 45/75 % relative humidity **b)** 1h 105°C **c)** 24h 105°C **d)** 24h 23°C in water

**e)** 48h 50°C in water **f)** 24h 120°C in oil **g)** 96h 45°C 95% relative humidity

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Laminate: **LG11H**

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| THICKNESS mm | TOLERANCE | Particular properties:                                 |
|--------------|-----------|--|
| 0,3          | ± 0,10    | - Low water absorption                                 |
| 0,5          | ± 0,12    | - Good dielectric properties                           |
| 0,8          | ± 0,16    | - Excellent mechanical properties at high temperatures |
| 1,0          | ± 0,18    | - Applications: similar to LG11                        |
| 1,5          | ± 0,24    |  |
| 2,0          | ± 0,28    |  |
| 2,5          | ± 0,33    |  |
| 3,0          | ± 0,37    |  |
| 4,0          | ± 0,45    |  |
| 5,0          | ± 0,52    |  |
| 6,0          | ± 0,60    |  |
| 8,0          | ± 0,72    |  |
| 10,0         | ± 0,82    |  |
| 12,0         | ± 0,94    |  |
| 15,0         | ± 1,02    |  |
| 20,0         | ± 1,30    |  |
| 25,0         | ± 1,50    |  |
| 30,0         | ± 1,70    |  |
| 35,0         | ± 1,95    |  |
| 40,0         | ± 2,10    |  |
| 50,0         | ± 2,45    |  |
| 60,0         | ± 2,80    |  |
| -            | -         |  |
| -            | -         |  |
| -            | -         |  |
| -            | -         |  |

TO BE KEPT in dry stores, in a horizontal position

We are available to effect cutting to measurement as well as machining to drawing of parts by CNC

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