

# Laminated Insulations

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### Technical Data Sheet

#### Epoxy Glass Sheet G11

| Mechanical Characteristics            | Test Method | Test Conditions            | Value                     |
|---------------------------------------|-------------|----------------------------|---------------------------|
| Flexural strength                     | ISO 178     | 23°C / 50%rF               | 450 MPa                   |
| Flexural strength at High temperature | ISO 178     | 1h / 150°C                 | 350 MPa                   |
| Modulus of elasticity                 | ISO 178     | 23°C / 50%rF               | 2400 MPa                  |
| Notched impact of strength            | ISO 179     | 23°C / 50%rF               | 60 k.m <sup>-2</sup>      |
| Tensile strength                      | ISO527      | 23°C / 50%rF               | 310 MPa                   |
| Compressive strength                  | ISO 604     | 23°C / 50%rF               | 260/550 MPa               |
| Interlaminar bonding strength         | DIN 53463   | 23°C / 50%rF               | 4500 N                    |
| Shear strength                        | ISO 893     | 23°C / 50%rF               | 30 MPa                    |
| <b>Electrical Characteristics</b>     |             |                            |                           |
| Insulation resistance                 | IEC 167     | 24h50°C +<br>24h50°C Water | 1,00E+12Ω                 |
| Edgewise breakdown voltage            | IEC 243     | 1h 150°C+90°C Oil          | 80 kV                     |
| Flat wise electrical strength         | IEC 243     | 1h 150°C+90°C Oil          | 6 kV.mm <sup>-2</sup>     |
| Dissipation factor at 1MHz            | IEC 250     | 23°C / 50%rF               | 0.019                     |
| Relative permittivity at 1 MHz        | IEC 250     | 23°C / 50%rF               | 4.9                       |
| Comparative tracking index CTI        | IEC 112     | 23°C / 50%rF               | 500 V                     |
| <b>Thermal Characteristics</b>        |             |                            |                           |
| Temperature index                     | IEC 216     |                            | 180°C                     |
| Thermal conductivity                  | DIN 52612   | 20-100°C                   | 0.25 W/m K                |
| Coefficient of linear expansion       | VDE 0304    | 20-130°C                   | 15 x 10 <sup>-6</sup> / k |
| <b>Other Characteristics</b>          |             |                            |                           |
| Density                               | ISO 1183    | 23°C / 50%rF               | 1.9 g.cm <sup>-3</sup>    |
| Water absorption                      | ISO 62      | 24h50°C +<br>24h50°C Water | 10 mg                     |
| Water absorption                      | ISO 62      | 24h50°C +<br>24h50°C Water | 0.05%                     |
| Colour                                |             |                            | Yellow/Brown              |

*These are typical average values and do not constitute a specification. It is the responsibility of the customer to assess the suitability of the product for use.*

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