

M86

SHEET

Composite: glass mat+roving – modified epoxy resin

Color: red-brown

Closest Standard: IEC 893 EPGM306

CHARACTERISTICS AND APPLICATIONS

Composite with good mechanical and dielectric properties at high temperatures . Insulating class H. Suitable to substitute UPGM 205 materials in some application, due to high content of glass has high compressive resistance and good value for money. Self-extinguishing material class V0 UL94. Anti-tracking properties. Standard EN 45545-2 Certified.

Mechanical properties

| | | |
|------------------------------|-----------|-----------------------|
| Flexural strenght | (ISO 178) | 460 MPa |
| Modulus of elasticity | (ISO 178) | 26000 MPa |
| Compressive strenght | (ISO 604) | 550 MPa |
| Izod impact strenght | (ISO 108) | 100 kJ/m ² |
| Tensile strenght | (ISO 527) | 300 MPa |

Electrical Properties

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|--|-------------|----------|--------|
| Electrical strenght at 90°C,in oil, perpendicular to lamination | (IEC 243-1) | 15 kV/mm | (2 mm) |
| Break down voltage, at 90°C in oil, parallel to laminations | (IEC 243-1) | 60 kV | |

| | | | |
|---------------------------------------|-------------|-----------|--|
| Permittivity at 48-62 Hz | (IEC 250) | 5,5 | |
| Dissipation factor at 48-62 Hz | (IEC 250) | 0,04 | |
| Comparative tracking index | (IEC 60112) | >600 V | |
| Dry arc resistance | (ASTM D495) | >180 sec. | |

Physical and thermal properties

| | | |
|-------------------------------------|---------------|------------------------|
| Density | (ISO 1183) | 2,0 gr/cc |
| Water absorption | (ISO 62) | 0,5 % |
| thermal conductivity | (ISO 8302) | 0,3 W/mK |
| linear expansion coefficient | (VDE 0304/2) | 10-20 $10^{-6} K^{-1}$ |
| Max working temperature | (ISO 11357-2) | 180°C |
| Insulating class | (CEI) | H |
| Flammability | (UL94) | V0 |

All the details on fire resistance properties can be found in EN 45545-2 Certificate.

Note: Above listed features are the result of tests performed in FILP internal laboratory and on products obtained from current production. Deviations from average values on these material may normally occur. Suggestion and indications to final user are provided just to draw user's attention to check the product features on his own. User has to test the product to determine its suitability to the required application.

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