

## Technical Data Sheet

## Lignostone® M I-2-E3-SQ

Laminated Densified Wood

### Typical characteristics

- High mechanical strength at medium density
- Laminated densified wood P4R according to the standard IEC 61061
- Standard quality red beech veneer; parallel stacked

### Typical industries

- Transformer
- Electrical Industry
- Electrical Insulating Components
- Oil-filled transformers

|                                                  | Test method | Unit                | Guideline value |
|--------------------------------------------------|-------------|---------------------|-----------------|
| <b>Mechanical properties</b>                     |             |                     |                 |
| Density                                          | IEC 61061   | g / cm <sup>3</sup> | 1.25            |
| Flexural strength <sup>1)</sup> ⊥                | IEC 61061   | MPa                 | 200             |
| Modulus of elasticity in flexion <sup>1)</sup> ⊥ | IEC 61061   | MPa                 | 16000           |
| Compressive strength ⊥                           | ISO 604     | MPa                 | 120             |
| Compressive strength II                          | ISO 604     | MPa                 | 90              |
| Shear strength II                                | IEC 61061   | MPa                 | 11              |
| <b>Thermal properties</b>                        |             |                     |                 |
| Thermal conductivity                             | DIN 52612   | W/m K               | 0.22            |
| Operating temperature continuous                 | DIN 7707    | °C                  | 100             |
| Temperature limit when drying                    | DIN 7707    | °C                  | 130             |
| <b>Physical properties</b>                       |             |                     |                 |
| Oil absorption                                   | IEC 61061   | %                   | 7               |
| Moisture content                                 | IEC 61061   | %                   | 5               |
| <b>Dielectrical properties</b>                   |             |                     |                 |
| Electric strength 90°C under oil ⊥               | IEC 61061   | kV / mm             | 15              |
| Electric strength 90°C under oil II              | IEC 61061   | kV/25mm             | 70              |
| Relative permittivity (50 Hz)                    | IEC 60250   | ε <sub>r</sub>      | 4.1             |
| Dielectric loss factor (50 Hz)                   | IEC 60250   | tan δ               | 0.01            |

[ri-inquiry@roechling.com](mailto:ri-inquiry@roechling.com) • [www.roechling.com/industrial/materials](http://www.roechling.com/industrial/materials)

Print: 15/12/2025 • Release: 19/09/2025 • Version: 4.0  
 PIM-Version: 990 • PIM-ID: 710060 • PIM-Code: 990-46-13.8.8-5.11.7.6-21  
 Company-IDs: 20000-1

Page 1 / 2 (Dates in DD/MM/YYYY)



|                            | Test method | Unit                      | Guideline value |
|----------------------------|-------------|---------------------------|-----------------|
| Specific volume resistance | IEC 60093   | $\Omega \times \text{cm}$ | $10^{12}$       |

⊥ = perpendicular to the lamination  
|| = parallel to the lamination

<sup>1)</sup> Minimum 4 longitudinal layers in the tension zone

The data stated above are average values verified on the basis of regular statistical tests and controls. All information in this publication is based on current technical knowledge and experience. Due to the large number of possible influences during processing and application, it does not exempt the user/processor from carrying out their own tests and trials. Responsibility for the evaluation of the end product for the intended use and compliance with the applicable relevant legal requirements lies exclusively with the user/processor as well as the distributor of the respective product/end product. Suggested uses do not constitute an assurance of suitability for the recommended purpose. The information in this publication and our declarations in Connection with this publication do not constitute acceptance of a guaranteed or warranted characteristic. Guarantee declarations require our separate express written declaration in order to be effective. We reserve the right to adapt the product to technical progress and new developments. The products described in this publication are only sold to customers with the appropriate expertise and not to consumers. Please do not hesitate to contact us if you have any questions or if you experience any specific application problems. If the application for which our products are used is subject to an official approval requirement, the user/processor is responsible for obtaining these approvals. Our application recommendations do not exempt the user/processor from the obligation to examine and, if necessary, clarify the possibility of infringements of third-party rights. In all other respects, we refer to our General Terms and Conditions (GTC). These are available at: [www.roechling-industrial.com/gtc](http://www.roechling-industrial.com/gtc)

