

Flame-retardant Potting Compound for Electronic and Electrical Components

EPOXONIC® 241 is a filled, two-component potting compound based on epoxy resin. It is solvent-free and features:

- high thermal conductivity
- excellent electrical insulation properties
- high glass transition temperature
- low thermal expansion
- flame-retardance
- good flow properties

Properties

- | | | |
|---|-----------------------------------|------------------|
| • Color | | |
| Part A | green | |
| Part B | colorless | |
| cured material | green | |
| • Density at 19.5°C (cured) | 1.70 gm/cc | |
| • Shore hardness at room temperature | D 90 | |
| • Glass transition temperature | 110 - 135°C | (cure-dependent) |
| • Coefficient of thermal expansion, $\alpha_{(30 - 110^\circ\text{C})}$ | $\sim 45 \times 10^{-6}/\text{K}$ | TMA |
| • Water absorption after 24 hours at 23°C | 0.07 | (DIN 53495) |
| • Flame-resistance | UL94 V0 | (not listed) |
| • Thermal conductivity | $\sim 1.0 \text{ W/mK}$ | |
| • Tensile strength at 23°C | 31.0 N/mm ² | DIN 53455 |
| • E-modulus at 23°C | 9000 N/mm ² | DIN 53457 |
| • Operating temperature | - 60°C to +100°C | |

Additional Properties

• Flexural modulus at 23°C	8200 N/mm ²	DIN 53452
• Flexural strength	70 N/mm ²	
• Elongation	0.9 %	
• Compressive strength at 23°C	127 N/mm ²	DIN 53454
• E-Modulus between 0.05 and 2 % deformation	4300 N/mm ²	
• Deformation at maximum pressure	17.7 %	
• Volume resistivity	3.4 x 10 ¹³ Ω	DIN IEC 93
• Surface resistivity	2.6 x 10 ¹² Ω	DIN IEC 93
• Dissipation factor, tanδ (1MHz)	0.079	DIN 53483
• Dielectric constant, ε _r (1MHz)	1.3	DIN 53483
• Dielectric strength	> 22 kV/mm	DIN EN 60243-1
• Tracking	passed	DIN IEC 112

Processing

• Mix ratio (Part A : Part B)	100 : 8 pbw
• Viscosity at 25°C (cone/plate viscometer)	
Part A	~ 36,000 mPas
Part B	~ 15 mPas
Reactive mixture	~ 5,500 mPas
• Pot life (time for viscosity to double)	30 – 45 minutes ¹⁾
• Method of application	dispenser
• Recommended cure schedule	1 hour at 70°C + 2 hours at 110°C

¹⁾ Dependent on batch size and temperature

Storage

The shelf life of **EPOXONIC® 241** Part A and Part B is 12 months when stored in original sealed containers at or below 25°C. The Part B can crystallize when stored at temperatures below 18°C!

Protect the Part B from sources of moisture! (Carbomate forms in the presence of moisture and CO₂.)

After long storage times, stir Part B to ensure homogeneity.

Packaging

EPOXONIC® 241 Part A is delivered in 20 liter metal pails containing 20 kgs material. The Part B is delivered in 5 or 10 liter cans with a pour spout containing 4.5 or 9 kgs material, respectively. Other packaging forms are available upon request.

Quality Assurance

If required **EPOXONIC® 241** will be supplied with a Certificate of Analysis.

Health and Safety

As with all epoxy materials, this product may cause skin irritation. Recommended industrial hygiene procedures should always be followed when handling this product. Avoid skin contact. If contact does occur wash area immediately with soap and water. Please refer to Material Safety Data Sheet for details.

Disclaimer

All information contained herein is based on the present state of knowledge and believed to be reliable. Any suggestions or recommendations are made without liability on our part since we shall have no control over the use of our product. Buyers and users should make their own assessment of this product under their own conditions and for their own requirements.