

Glob Top Material

EPOXONIC® 29 is a filled, two-component material based on epoxy resin. It is also available as a one-component "frozen product". It was developed as a glob top for high-end components on ceramic substrates and on printed circuit boards. Potting of electronic components with **EPOXONIC® 29** under vacuum is also possible.

Main Characteristics

- very low thermal expansion
- low ionic content
- long pot life
- good flowability

Properties

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|--|---------------------------------|--------------------------|
| • Colour | black (lightproof) | |
| • Coefficient of thermal expansion | | |
| α_1 (40 - 80°C) | $20 \pm 1 \times 10^{-6} /K$ | Mettler TMA |
| α_2 (180 - 230°C) | $78 \pm 2 \times 10^{-6} /K$ | |
| • Glass transition temperature (Tg) | $132 \pm 4^\circ C$ | Mettler TMA / DSC |
| • Hydrolysable chloride content
(H ₂ O / 2 bar / 120 °C) | <5 ppm | Siemens method F12-F5241 |
| • Filler content | approx. 75 % by weight | |
| • Density at 23°C | approx. 1.7 gms/cm ³ | |

Processing (One-component material)

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|--------------------------|-------------------------|
| • Viscosity at 40°C | $17,000 \pm 4,000$ mPas |
| • Processing temperature | 25 - 50°C |

Processing of one-component material (continued)

- Temperature of substrate 60 - 150°C
- Method of application dispenser with needle: Ø 0.58 or 0.84 mm
- Pot life at 25°C approx. 8 hours
- Recommended cure schedule 20 minutes at 130°C + 4 hours at 140°C
or 4 hours at 100°C + 4 hours at 140°C
or 2 hours at 140°C ($T_g = 118^\circ\text{C}$, $\alpha_1 = 27 \times 10^{-6}/\text{K}$)

Processing of two-component material

- Mix ratio (Part A : Part B) 1 : 1 parts by weight
- Mixing temperature 25°C
- Deair at approx. 1 mbar for 5 - 10 minutes

Packaging

EPOXONIC® 29 is delivered as a frozen product in syringes containing 18 gms or 56 gms material. **EPOXONIC® 29** is available for special applications as a two-component material (Part A + Part B) supplied in kits in syringes or in cans.

Storage

EPOXONIC® 29 as a frozen product should be stored at or below -25°C. At this temperature the shelf life is 12 months. The separate components (Part A and Part B) have a shelf life of about 6 months in sealed containers at 25°C.

Quality Assurance

If required **EPOXONIC® 29** 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.