EPOXONIC
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EPOXONIC® 344

Potting compound for Automotive Engineering, Microelectronics, Electrical Engineering and Medical Engineering

EPOXONIC® 344 is a solvent-free, mineral filled 2-part potting compound based on epoxy resin.

Main characteristics:

- Heat resistance to 150 °C
- Thermal shock resistance
- Chemical resistance
- Excellent toughness

Application:

EPOXONIC® 344 is especially suited for potting of electronic and electrical devices (e.g. high voltage plugs).

Properties:

Specific values measured by standard test specimen at 23 °C, cured 1 h / 70 °C and 1 h / 120 °C.

Operating temperature [1)]	-40 °C to +150 °C	
Colour	black	
Shore hardness	92 Shore D	DIN EN ISO 868
Density	1.7 g/cm^3	DIN EN ISO 1183-1
Coefficient of linear thermal expansion CTE	35 – 45 x 10^{-6}/K (< 80 °C)	ISO 11359-2
Glass transition temperature	120 – 130 °C	DIN EN ISO 11357-2
Water absorption	1 % at 85 °C / 100 % rH (Saturation Value) 0.13 % at 30 min / 100 °C	DIN EN ISO 62
Thermal conductivity	0.7 W/mK	DIN EN ISO 8894-1
Tensile strength	65 MPa	DIN EN ISO 527
E-modulus	8.500 MPa	DIN EN ISO 527
Elongation at break	1.0 %	DIN EN ISO 527

1) Depending on the application, other temperature limits may be reasonable

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Additional Properties:

Flexural strength	130 MPa	DIN EN ISO 178
Flexural modulus	8,200 MPa	DIN EN ISO 178
Outer fibre strain at break	1.8 %	DIN EN ISO 178
Compressive strength	150 MPa	EN ISO 604
Compressive modulus	6,800 MPa	EN ISO 604
Specific volume resistivity	2.0 x 10^{15} Ωcm	DIN IEC 60093
Surface resistivity	1.5 x 10^{15} Ωcm	DIN IEC 60093
Dielectric strength	> 25 kV/mm	DIN EN 602344-2

Processing:

Mix ratio		Part A : Part B = 100 : 13 parts by weight
Mixing temperature		20 – 40 °C
Viscosity cone/plate viscometer		
	25 °C	34,000 – 45,000 mPas (Part A)
	25 °C	600 – 700 mPas (Part B)
	25 °C	9,000 – 11,000 mPas (Mixture A + B)
	40 °C	2,500 – 3,500 mPas
Pot life	40 °C	approx. 30 min (time to double viscosity)
Method of application		e.g. dispenser
Cure schedule		e.g. 1 h / 70 °C + 1 – 2 h / 100 – 120 °C Optimum cure schedules have to be determined by the specific application.

Storage:

The shelf life of EPOXONIC® 344 Part A ad Part B is 12 months at temperatures at 15 – 25 °C when stored in tightly closed, original containers.
Part A and Part B have to be stirred very well before use.
Partly emptied containers should be tightly closed immediately after use.
EPOXONIC® 344 Part A may cristallize after longer periods of time resp. storage at lower temperatures or high temperature changes. If crystallization occurs, this can be removed by heating up to 60 – 70 °C and stirring.

Health and Safety:

Recommended industrial hygiene procedures should always be followed when handling this product. Please refer to the corresponding Material Safety Data Sheet for details.

Packaging:

EPOXONIC® 344 Part A is delivered in 20 l hobbocks containing 25 kg material. Part B is delivered in 5 l metal cans containing 3.25 kg material. Other packaging options are available upon request.

Quality Assurance:

If required EPOXONIC® 344 will be supplied with a Certificate of Analysis.

Disclaimer:

All information 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.