

# EPOXONIC® 33

## Potting compound for temperature-sensitive devices in Microelectronics and Electrical Engineering

EPOXONIC® 33 is a solvent-free, mineral filled 2-part-potting compound based on epoxy resin.

### Main characteristics:

Moderate curing temperature

Low viscosity

High elongation at break

Low corrosion

### Application:

EPOXONIC® 33 is especially suited for low stress potting of temperature sensitive electronic devices (e.g. PCB).

### Properties:

Specific values measured by standard test specimen at 23 °C, cured 7 h / 60 °C.

Operating temperature <sup>1)</sup>	-40 °C to +80 °C	
Colour	grey	
Shore hardness	82 Shore D	DIN EN ISO 868
Density	1.5 g/cm <sup>3</sup>	DIN EN ISO 1183-1
Coefficient of linear thermal expansion CTE	105 – 115 x 10 <sup>-6</sup> /K (50 – 70 °C)	ISO 11359-2
Glass transition temperature	85 – 90 °C	DIN EN ISO 11357-2
Water absorption	0.3 % at 30 min / 100 °C	DIN EN ISO 62
Thermal conductivity	0.5 W/mK	DIN EN ISO 8894-1
Tensile strength	20 MPa	DIN EN ISO 527
E-modulus	1,200 MPa	DIN EN ISO 527
Elongation at break	11.0 %	DIN EN ISO 527

## Additional Properties:

Flexural strength	33 MPa	DIN EN ISO 178
Flexural modulus DIN 534	1,600 MPa	DIN EN ISO 178
Outer fibre strain at break	8.0 %	DIN EN ISO 178
E-corrosion	A1	DIN EN 60426
Specific volume resistivity	$2.3 \times 10^{14} \Omega\text{cm}$	DIN IEC 60093
Tracking resistance	KB > 600	DIN EN 60112
Surface resistivity	$9.6 \times 10^{14} \Omega$	DIN IEC 60093
Dielectric strength	35 kV/mm	DIN EN 60243-2

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

## Processing:

Mix ratio	Part A : Part B = 100 : 22 parts by weight	
Mixing temperature	20 – 40 °C	
Viscosity cone/plate viscometer		
	25 °C	10,500 – 13,500 mPas (Part A)
	25 °C	400 – 700 mPas (Part B)
	25 °C	3,600 – 4,800 mPas (Mixture A + B)
Pot life	25 °C	60 – 90 min (time to double viscosity)
Method of application	e.g. dispenser	
Cure schedule	e.g. 7 h / 60 °C or 1 h / 120 °C Optimum cure schedules have to be determined by the specific application.	

## Storage:

The shelf life of EPOXONIC® 33 Part A and Part B is 12 months at temperatures  $\leq 25$  °C when stored in tightly closed, original containers. Part A is to be stirred very well before use.

Partly emptied containers should be tightly closed immediately after use.

## Packaging:

EPOXONIC® 33 Part A is delivered in 1 l metal cans containing 1 kg material.

EPOXONIC® 33 Part B is delivered in 0.5 l metal cans with 0.25 kg material. Other packaging options are available upon request.

## 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.

## 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.

## Quality Assurance:

If required EPOXONIC® 33 will be supplied with a Certificate of Analysis.