

Thermally conductive products

Thermicast® TA 25012

Description:

Thermicast® TA 25012 is a flame-retardant, two-component epoxy resin potting system with high thermal conductivity for encapsulation and protection of electronic assemblies. The material has been specially developed for applications where both efficient heat dissipation and high resistance to moisture, chemicals and environmental influences are required.

Due to its good thermal conductivity, Thermicast® TA 25012 is particularly suitable for LED applications as well as for electronic assemblies with increased heat generation. The halogen-free flame retardant technology used meets the requirements of UL94 V-0 and generates comparatively low smoke development and low toxic emissions in the event of a fire. The material does not contain any abrasive fillers and thus reduces the wear and tear of mixing and dosing systems.

Features:

Thermicast® TA 25012 has the following properties: two-component epoxy resin system, high thermal conductivity, flame retardant according to UL94 V-0, halogen-free flame retardant technology, good chemical resistance, good water resistance, very good electrical insulation, low tool wear due to non-abrasive fillers, good dimensional stability, easy processing in a double-chamber bag.

Applications:

Thermicast® TA 25012 is particularly suitable for: LED modules, LED drivers, power electronics, power supplies, control units, sensors, electronic assemblies, outdoor applications, industrial electronics, electronic potting applications with increased heat dissipation.

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Delivery forms: Thermicast® TA 25012 is supplied in a double-chamber bag system.

Processing: Thermicast® TA 25012 is supplied as a practical double-chamber bag system. For processing, the separator clip is first removed and then the resin and hardener are thoroughly mixed together within the sealed bag. After complete homogenization, one corner of the bag is opened so that the material can be dosed directly. This process reduces air pockets and facilitates clean processing without the need for additional mixing vessels.

Note: The values given are typical guideline values and serve as technical orientation. They do not represent guaranteed product properties. A suitability test for the respective application is recommended. Technical changes in the course of product development are reserved.

Storage conditions: Thermicast® TA 25012 should be stored at room temperature in dry rooms with protection from sunlight.

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Material base

Feature	Description
Resin system	Epoxy resin
Components	Two-component system
Color	White
Physical form	Viscous liquid
Packaging	Double chamber bag

Processing characteristics

Feature	Unit	Value
Service life (20°C)	min.	90
Gel time (23°C)	Hours	5
Curing	Hours	24
Storage Temperature	°C	+15 to +30

Characteristics of the cured system

Feature	Unit	Value
Color	-	White
Hardness	Shore D	85
Viscosity (23 °C)	mPa·s	16.700
Coefficient of Thermal Expansion	ppm/°C	30
Tensile strength	MPa	82
Dielectric Strength	kV/mm	10
Volume resistance	Ω·cm	1 × 10 ¹⁵
Relative Permittivity (50 Hz)	-	6,0
Dissipation factor (50 Hz)	-	0,055

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Feature	Unit	Value
Thermal conductivity	W/m·K	1,27
Continuous use temperature	°C	-40 to +125
Maximum operating temperature	°C	+130
Minimum Operating Temperature	°C	-40
Additional features	-	Resistant to water and numerous chemicals
RoHS	-	Compliant
UL94 flammability	-	V-0

Trademark information: Thermicast® is a registered trademark of Dr Dietrich Müller GmbH, Germany.

Please note:

The information in this technical data sheet is based on our current knowledge and experience. Due to the wide range of possible influences during application, it does not exempt the processor and user from carrying out their own tests and trials. A legally binding guarantee of certain properties or suitability for a specific application cannot be derived from our information. Depending on the individual case, we recommend consulting us. The recipient of our products is responsible for observing any industrial property rights and existing laws.