

EP551

Clear unfilled epoxy adhesive

Trelleborg EP551 is a two component, low viscosity, epoxy adhesive system designed for use up to temperatures of 150 °C. It may be used for many diverse bonding applications but is most suitable as a thin bond line adhesive for blocking up Trelleborg epoxy boards. The adhesive system gels at room temperature, but requires a post cure to achieve maximum properties.

Features & Benefits

- Low viscosity
- High heat stability
- Unfilled

Applications

- EP551 is designed for epoxy board bonding and is suitable for use with EP678, EP700 and TB650.

Product Sizes

EP551 is available in 5 kg and 1 kg kits.



Storage

Adhesive EP551 and hardener EP551 should be stored in original containers at a temperature between 15 and 25 °C. The product may crystallize during storage. If crystallized, warm to 55 – 65 °C until dissolution, then mix well. Both components, if stored in the specified conditions, have a shelf life of 12 months from the date of production.

Health & Safety

Eye protection and gloves should be worn when working with Trelleborg EP551.

Please refer to the Trelleborg MSDS.

PHYSICAL PROPERTIES

Product	EP551 Adhesive	EP551 Hardener	Mixture
Material	Epoxy formulation	Amine formulation	Epoxide
Aspect	Liquid	Liquid	Liquid
Colour			Clear
Mix Ratio (pbw)	100	14	
Specific Gravity			1.15
Viscosity	3800 cP	70 cP	1800 cP
Gel Time* (150 g)			30 - 35 minutes
Pot Life* (200 g)			30 minutes

* data measured at 25 °C

	MECHANICAL PROPERTIES	
Shore Hardness	88 D	ISO 868
Flexural Strength	116.5 MPa	ISO 178
Flexural Modulus	3,275 MPa	ISO 178
Tensile Strength	85.5 MPa	ISO 527-1
Compressive Strength	128 MPa	ISO 604
Coefficient of Thermal Expansion	4.8×10^{-6} m/m/°C	
HDT, Post Cure	150 °C	ASTM D648

Processing Guidelines

Preparation of Substrates

Read the Material Safety Data Sheet before use.

Substrate surfaces must be cleaned and dried to remove traces of dust, dirt, oils or release agent before applying EP551. If necessary, degrease with 1-bromopropane or other suitable solvent. Models, moulds and parts to be assembled must withstand the recommended post-cure cycle temperature.

Mixing and Application

Always use clean, dry tools for mixing and applying.

Adhesive EP551 must be mixed with hardener EP551 in the exact mix ratio by weight indicated. Both components must be at room temperature (20 – 25 °C).

Mix until smooth, paying attention to the material on the edges of the container and not to incorporate too much air.

For gluing and repair of epoxy boards intended for applications at elevated temperatures, the use of vacuum is recommended to avoid the retention of any air pockets.

Polymerization and Post-Curing

High temperature epoxy systems require an elevated temperature post cure to enable them to develop their full physical and temperature properties.

Select one of the following cure schedules depending upon the desired properties of the final tool.

	OPTION I	OPTION II
24 hrs. at 25 °C	X (S)	X (S)
2 hrs. at 66 °C	X (S)	X (S)
4 hrs. at 66 °C		
1 hr. at 93 °C	X (S)	X (U)
1 hr. at 121 °C	X (S)	X (U)
1 hr. at 149 °C	X (S)	X (U)
1 hr. at 177 °C	X (S)	X (U)

S = supported U = Unsupported

Contact Us

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