

EP553



**Trelleborg EP553 is a two component, low specific weight, epoxy adhesive system designed for use up to temperatures of 97 °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 specific weight
- High thixotrophy
- Filled

#### Applications:

- EP553 is designed for epoxy board bonding.

#### Product Sizes

EP553 is available in 5 kg kits.



#### Storage

Adhesive EP553 and hardener EP553 should be stored in original containers at a temperature between 20 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 EP553.

Please refer to the Trelleborg MSDS.

#### PHYSICAL PROPERTIES

Product	EP553 Adhesive	EP553 Hardener	Mixture
Material	Epoxy resin	Amine formulation	Epoxide
Aspect	Paste	Liquid	Paste
Color	Grey	Yellow	Grey
Mix Ratio (pbw)	100	20	
Density	0.86 g/ml	0.95 g/ml	0.88 g/ml
Viscosity	516000 mPas	1230 mPas	430000 mPas
Gel Time* (150 g)			100 minutes
Pot Life* (150 g)			80 minutes

\* data measured at 23 °C

	MECHANICAL PROPERTIES	
Shore Hardness	75 D	ISO 868
Flexural Strength	29.6 MPa	ISO 178
Flexural Modulus	2,330 MPa	ISO 178
Tensile Strength	18.1 MPa	ISO 527-1
Compressive Strength	25.9 MPa	ISO 604
Tg	97 °C	DSC

## 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 EP553. If necessary, degrease with 1-bromopropane or other suitable solvent. Models, molds 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 EP553 must be mixed with hardener EP553 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

A full cure is achieved after 48 hours at 20°C, but to allow the material to reach its full properties, a thermal cycle with a gradual curve is recommended. Leave the product at room temperature for at least 24 hours, then warm it to 40°C for 1 hour, 60°C for 1 hour, 80°C for two hours and finally 100°C for two hours. Allow the product to gradually return to room temperature.

## Contact Us

Trelleborg's Applied Technologies division is an industry expert in delivering innovative and reliable solutions that maximize performance for our customers. Our vast range of specialized, customizable materials ensure peace of mind at every stage of your project. With reliable and efficient project management and manufacturing we endeavor to take performance to new levels by achieving your goals safely, on time and within scope.

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