

Product information

Adhesives

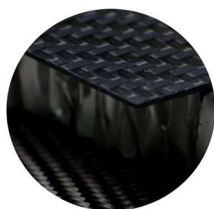
EP-661

FEATURES

- Use up to 230°C
- Good mechanical properties

COMPOSITION

- Resin: EP661A
- Hardener: EP661B



EP661 is a two-component epoxy system, without fillers, characterized by high resistance to high temperatures. Designed for uses up to 230°C, it finds application as an adhesive for structural bonding or making composite products with high thermal stability.

APPLICATIONS

- Structural bonding and composite materials with high heat resistance.

TYPICAL PROPERTIES

This data does not constitute the Product Sales Specifications. The values indicated refer to typical properties and are not to be understood as extreme minimum or maximum values. They do not constitute a guarantee of product conformity and do not relieve the buyer from the need to test the suitability of the products before use or placing them in his production cycle. Please contact your local sales representative to obtain the product specifications.

Property	Unit	Value
Color (Resin/Hardener)	Visual	Yellow / Yellow
Density at 23°C (Resin/Hardener)	g/cm ³	1.18 / 1.00
Viscosity at 23°C (Resin/Hardener)	mPa.s	42000 / 2600
Mix ratio Resin : Hardener	pbw	100 : 40
Mix ratio Resin : Hardener	pbv	100 : 47
Mixture density at 23°C	g/cm ³	1.13
Mixture viscosity at 23°C	mPa.s	9200
Pot Life [150g at 23°C]	mins	110
Gel time [150g at 23°C]	mins	130
Exothermic peak	°C	138
Hardness	Shore D	85
Flexural modulus	MPa	2900
Flexural strength	MPa	56.3
Tensile strength	MPa	24.3
Elongation at break	%	3.9
Compressive strength	MPa	33.2
Tg	°C	212

SETTING

In presence of partial crystallization or solidification, heat in oven at 40°C-50°C until complete melting. Avoid local overheating.

SUBSTRATE SETTING

Bonding: the surface of the supports must be clean, free from dust, oils and release agents. If necessary, degrease with 1-bromopropane or other suitable solvent. Composites: model, mold or conformer must withstand the temperature of the chosen post-curing cycle.

RESIN SETTING

It is recommended to use at room temperature for gluing. For other applications it is possible to preheat EP661A up to 40°C to reduce the viscosity. Elevated temperatures increase the reaction rate, reducing the workability time.

MIXING

Mix the two components in the proportions indicated for at least 4-5 minutes until a homogeneous mixture is

obtained. Make sure that the material on the sides and bottom of the container is well mixed. The greater the quantity of material, the shorter the workability time. The higher the temperature of the environment and components, the shorter the workability time.

ATTENTION! This product can generate a strong, uncontrolled exothermic reaction, with decomposition above 250°C. Prepare limited quantities of material and proceed with application.

APPLICATION

The yield of the product of about 400g/m², varies according to the method of application and the flatness and porosity of the substrates.

POTLIFE AND GELTIME

The Potlife or time of usable time the mixture is normally the time required for an increase equal to twice the initial viscosity. Pot-life and Gel-time depend on mass and temperature: the greater the mass, the faster the reaction will be. The higher the temperature, the faster the reaction.

CURING

The system cures at room temperature but a post-curing cycle is required to achieve stability at high temperatures. The best performances are obtained with the following cycle:

24 hours at 25°C +
6 hours at 80°C +
2 hours at 120°C +
2 hours at 180°C +
2 hours at 200°C + (T_g=198°C)
2 hours at 220°C + (T_g=212°C)

Recommended temperature ramp:
heating: 1°K/min
cooling: 1°K/min.

Post cure in the mold or on a conformer to avoid distortion during post cure.

HANDLING PRECAUTIONS

The information for a correct and safe handling of the products is contained in the safety data sheet. Consult the safety data sheets before use for complete information on the risks to health and the environment and for the suitable protective devices to be adopted. Share the safety data sheets with all staff involved in the use of the products.

USABLE LIFE - STORAGE

Resin and Hardener must be stored in the original unopened containers at a temperature between +15°C and +35°C. Epoxy resins can crystallize at low temperatures: heat to 40-50°C for 8-12 hours to restore product. Bring the components to 20-25°C before use. Be sure to close containers tightly after use. If stored under the specified conditions, the components have a shelf life of 24 months from the date of manufacture.

PACKAGING

This material is available in 3.5 kg kits (EP661A 2.5 kg + EP661B 1.0 kg). EP661A is supplied in 200kg drums, EP661B in 20kg pails.

LIMITATIONS

This product is neither tested nor represented as suitable for food contact, skin contact or medical uses.

LIMITED WARRANTY

The information contained in this document is offered in good faith based on Chemix research and is believed to be accurate. However, as the conditions and methods of use of our products are beyond our control, this information should not be used as a substitute for the tests that customers must first perform to ensure that Chemix products are fully satisfactory for their specific applications. The warranty is only applicable to the values indicated in the Product Sales Specifications. The sole and exclusive compensation for products with values

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www.chemix.it

Chemix Srl Via Berlinguer 8, 21010 Golasecca (Italy). Phone +39(0)331959373 info@chemix.it