

## **ABL (STEVENS) Resin & Glass**

Unit 4, Millbuck Way, Springvale Industrial Estate, Sandbach, Cheshire, CW11 3HT.

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### **CLEAR RIGID EPOXY RESIN**

This CLEAR RIGID EPOXY RESIN system is specially formulated for decorative applications including casting.

It is totally clear and has good UV resistance giving excellent optical properties with negligible shrinkage on curing.

**PLEASE READ ALL THESE NOTES BEFORE USING.**

#### **Preparation**

This resin can be used for casting decorative parts featuring a long working time, ease of use and low exotherm. Ensure ambient material and workshop temperature is between 18 to 25°C and humidity level below 70%.

#### **Mixing by Volume - Resin 2 : 1 Hardener**

Mixing is critical and must be accurate. 2 parts resin for 1 part of hardener will provide a hard and rigid casting once cured. Pour the hardener first then the resin. The combined liquids must be thoroughly mixed manually or mechanically to completely remove any haziness or streaks, scraping the sides and base of the mixing pot then transferring the mix to a second container and stirring is best practice for good castings. An entirely homogeneous mix is essential in achieving optimal results. It is important to only mix the correct quantity at a time as epoxy systems tend to exotherm when kept in a mass.

**(Mixing by weight: 100g resin to 45g hardener pro-rata).**

#### **Application**

The mixture can then be poured into a mould. The mould can be a hard mould or made of silicone rubber. Moulding can be carried out by gravity or under vacuum or pressure. It does not trap air easily and does not heat up when used properly. Temperature should be between 18 to 25°C. Humidity level below 70%. Pot life for a 500g mix at 22°C is approx 8-10 hours. The mix will produce a hard casting, suitable for manufacture of fancy shapes, decorative items etc. Should a new mix be applied onto cured resin, the contact surface should always be sanded in order to enhance adhesion.

#### **Curing**

This resin will cure at different rates based on the volumes used and thickness of parts. Typically a 500g, 10cm thick cast will be de-mouldable after 36 hours @ 25°C. The resin will continue to cure for several days at room temperature. Thin section castings can be made to cure faster by post-curing. This involves initial curing at room temperature for 24 hours, then increasing the temperature (up to 60°C max.) for 15 hours.

*The data provided in this document is the result of tests and is believed to be accurate. We do not accept any responsibility over the mishandling of these products and our liability is limited strictly to the value of the products we manufacture and supply.*

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### **CLEAR RIGID EPOXY RESIN**

#### **Physical & mechanical properties**

Properties given for a temperature of 22°C.

Resin:	Clear liquid, viscosity of 1,000 mPas.+/-200mPa.s
Hardener:	Clear liquid, viscosity of 80 mPas.+/- 20mPa.s
Mixture:	Clear liquid, viscosity of 300 to 450 mPas.
Mixing density:	1.1g./cc.
Hardness:	85 Shore D
Elongation at break:	8%.
Tensile strength:	66 MPa.
Flexural strength:	105 MPa.

The optimal mechanical properties will be reached after 21 days at 20°C or 15H at 60°C.

#### **TROUBLESHOOTING**

##### **PROBLEM**

Resin is crystalline and/or opaque

##### **CAUSE**

Long storage time or temperature  
below 10°C

##### **REMEDY**

Sit resin container in hot water ~50°C or on a radiator and agitate contents frequently until it becomes clear again. It can now be used as per instructions.

##### **NOTE**

Ensure ALL signs of cloudiness and/or crystals are melted before mixing with hardener.

Uncured after 24 to 48 Hours: Wrong Mixing ratio and/or low temperature.

The Mixture gets too hot: High temperature and/or too much mixture was prepared.

Air bubbles are entrapped: Mixing was too fast and did not have time to release air.

Sticky, greasy surface: Humidity levels too high.

#### **PACKING & STORAGE**

Shelf life is one year in sealed containers as provided. Keep containers sealed and away from heat and cold.

#### **HEALTH & SAFETY**

This product is a modern formulation of the safest epoxy chemicals available. It is however advised to follow basic rules such as avoiding skin contact, wear masks when producing dust. Please read our standard health and safety sheet for more information. In case of eye contamination, wash with water and seek medical advice.

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