

CLEAR EPOXY RIGID (CER) RESIN

This CLEAR EPOXY RIGID resin system is specially formulated for decorative applications including casting. It is totally clear and UV stabilized giving excellent optical properties with negligible to no shrinkage on curing. PLEASE READ ALL THESE NOTES BEFORE USING.

Physical & mechanical properties

Properties given for a temperature of 22°C.

Resin:	Clear liquid, viscosity of 1,000 mPas.
Hardener:	Clear liquid, viscosity of 150 mPas.
Mixture:	Clear liquid, viscosity of 300 to 450 mPas.
Mixing density:	1.1.
Mix Ratio	2:1
Hardness:	95 Shore D (2+1 mix).
Elongation at break:	8% for the 2+1 mix.
Tensile strength:	66 MPa (2+1mix).
Flexural strength:	105 MPa (2+1 mix).

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

Storage at below 10°C

REMEDY

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

NOTE

Only when liquid does resin react to low temperatures in this way, when properly catalysed and fully cured the resin retains its clarity permanently.

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.

Preparation

It 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

Mixing is critical and must be accurate. 2 parts resin for 1 part of hardener will provide a hard 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

It can then be poured into a mould. The mould can be a hard mould (plastic) or made of silicone rubber. Moulding can be carried out by gravity or under vacuum. 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 is as follows for a 500g mix at 22°C 2+1 mix=10 hours. The hard mix (2+1) will provide 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.

Once the resin is mixed and poured into the mould, gently pass warm air from a heating gun or hairdryer (slowest speed setting) – this will assist to removal any bubbles generated during mixing.

Curing

Parts can be released (de-moulded) after the following time at 22°C. =24 hours, 15°C = 36 hrs.

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.