EPIDECO
CREATIVE TECHNOLOGIES

Polyester Resin

How to use

SAFETY & PERSONAL PROTECTION

These products are capable of producing adverse health effects, ranging from minor skin irritation to serious systemic effects. Exposure to these materials should be minimized and avoided, if feasible, through the observance of proper precautions, use of appropriate engineering controls and proper personal protective clothing and equipment, and adherence to proper handling procedures.

Personal protection should be worn at all times, safety goggles, gloves, apron and overalls.

MATERIALS

Resin Kits are supplied with the following materials:
-Resin
-Catalyser

WORKING AREA

Laminating should be done at warm temperatures ideally around 20ºC, as this ensures the resin will cure correctly. Resin will not cure adequately below 15ºC, and at temperatures above 30ºC, they will cure too quickly.

MIXING CATALYST

All resins require the addition of catalyst (hardener) to initiate the curing process. Use a safety dispenser to add 20ml of catalyst per kilo of resin. Stir thoroughly. The hardening process begins immediately, so only add catalyst to a working quantity. Once catalysed the resin gradually cures, taking on a jelly-like consistency in about 10 - 20 minutes before becoming hard in about 30 - 40 minutes at room temperature (about 20ºC). The curing process generates heat within the resins. Too much catalyst or large volumes of resins increases this heat. Over catalysing the resin can cause the material to overheat. Thorough mixing of catalyser into resins is very important. Also the correct quantities should be used for the best results. Dispensers are advised for accuracy. 1% catalyst is considered a slow mix, 2% is ideal, 3% is a fast mix. The higher the temperature the faster the cure. As a general guide 2% addition at 20ºC gives 15 - 20 minutes pot life.

VENTILATION

Polyester resin gives off potentially toxic styrene monomer when it cures. All work with uncured polyester resins must be done in a well ventilated area, normally with an exhaust fan running.

SURFACE PREPARATION

Clean the area with acetone and let dry completely. Sand the area with no finer than 80 grit sandpaper and wipe the area with acetone before lamination. Make sure you remove all loose paint, primer, and other debris. For direct to wood applications apply a thin coat of resin to the wood and allow to cure for 1 hours then follow up with additional layers of fibreglass and resin. This ensures penetration to wood and proper adhesion to your surface before laminating. You have 4 hours between coats otherwise sanding will be required.

APPLYING THE LAMINATE

• Mix a maximum of 2kgs at a time, enough for between 1 and 1.5 m² of fibreglass.
• If using the kit to repair a surface ensure that the surface is dry, clean, free from rust etc. It is advisable to sand the old surface as this will ensure better adhesion for the resin.
• The number of layers of polyester resin required will vary depending on the application. This can vary from one layer to multiple layers.
• Paint on a coat of catalysed resin to the surface and then lay on the rest section of fibreglass, apply more resin to "wet out" (saturate) the fibreglass. Then apply the next layer, which should be cut slightly smaller to create a built in staggered overlap and again apply more resin. Once the fibreglass has been 'wetted out' it is necessary to consolidate the two layers of fibreglass and this is done using a metal roller. The roller when used, forces the two layers of fibreglass together and removes any trapped air, this appears in a laminate as a white blister, and care must be taken to ensure that this is done.
• Having completed this section start on to the next layer. Do not wrap fibreglass around sharp corners; lay into right angled bends butt jointing the fibreglass.
• Since there will be a butt joint at the corner it is then recommended that a strip of fibreglass approx. 200mm is cut with the edges frayed out and then applied as a tape would be into the corner. Once the fibreglass has been "wetted out" it is easier to work into corners and around more complicated and compound shapes. For this purpose a brush is used.
• Apply as many layers as necessary.

STORAGE

Keep out of reach of children. The product should be stored in a closed container at room temperature. For extended periods resins should be refrigerated to extend their shelf life. Caution: Do not store resins and catalysts in areas used for food storage.

Mix thoroughly before using.

CLEAN UP

Tools and brushes with Acetone as soon as you are through to prevent resin from hardening on them.

DISCLAIMER

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