

Polyester Pattern-Coat Primer

Key Features

- Spray or Brush Application
- Very High Build
- Easily Sanded
- Easily Overcoated
- Polishable to a Medium Gloss

Safety Information

- The product has a strong 'styrene' odour and should only be used in a well ventilated workshop, studio or garage.
- Polyester resin is flammable and should be kept away from any sources of ignition.
- MEKP on its own is a strong oxidising agent and should be kept away from combustible materials, especially paper and cardboard.
- Always wear protective gloves and eye protection when handling the liquid resin and catalyst.
- Read this document in conjunction with the SDS

Product Description

Easy Composites' PCP Polyester Pattern-Coat™ Primer is a specially formulated high-build polyester resin system designed for the fast and easy surfacing of composite patterns. The Primer will not sag or run off the vertical sides of patterns up to a 1.5mm thick application making light work of pattern surfacing.

PCP Polyester Pattern-Coat™ Primer can be used on its own as a fast-building, easy-to-sand and adequately glossy pattern surface, ready to take moulds straight off, or in conjunction with PCG Polyester Pattern-Coat™ Hi-Gloss when a very high gloss is required.

Recommended Uses

This PCP Polyester Pattern-Coat Primer is the essential ingredient to effective, high quality pattern making. It is applied to a part finished pattern to help give a smooth even surface layer ready for taking a mould from.

How to Use

Catalyst Ratio

100p.b.w PCP Polyester Pattern-Coat Primer

2.0% MEKP Catalyst

Resin to catalyst ratios above are listed as parts by weight although parts by volume will effectively yield the same results.

You must maintain the correct overall ratio of resin to catalyst to ensure a proper cure. Failure to do so will result in a poor or only partial cure of the resin, greatly reduced mechanical properties and possibly other adverse effects.

Mixing Instructions

For most castings a mix-ratio of 2% is suitable. This would mean 100g of resin to 2g of catalyst.

In very warm conditions the catalyst ratio can be reduced to around 1% and in colder conditions or when casting very small parts the ratio can be increased to 2.5%. Do not over-catalyze the resin; doing so can cause the resin to exotherm (cure too quickly and get hot) which can crack or discolour the resin. If in doubt, use a lower catalyst ratio and be patient whilst the resin cures fully.

PCP Polyester Pattern-Coat™ Primer can be applied directly to polyurethane foam, modelboard, tooling block, MDF, wood, metal and some plastics. PCP Polyester Pattern-Coat™ Primer can be applied over patterns that have been filled with polyester bodyfiller however it should not be applied to expanded polystyrene foam (Styrofoam) because it will react and dissolve the foam.

Directions for use

Patterns made from very low density foams (anything less than around 40kgs/m³) should be 'scrimmed' with a layer of polyester resin reinforced with a lightweight glass cloth before application of the Pattern-Coat™ Primer.

To ensure a good bond, key the surface of the pattern using 80grit abrasive paper and remove any dirt or grease using acetone.

PCP Polyester Pattern-Coat™ Primer should be mixed with MEKP Catalyst at a ratio of 2% catalyst (can be adjusted according to pot-life required and ambient temperature).

Apply directly to the surface of the pattern by brush. Application by gelcoat spray gun will yield even better results (thin using 25% pure acetone).

Pigmented Guide-Coats

When sanding a coated pattern it is very useful to know how far through the pattern coat you have sanded so as to avoid breaking through the coating and through to the pattern material (such as foam) underneath. To help with this we recommend applying the PCP Polyester Pattern-Coat™ Primer in two layers, the first as supplied and the second layer with the addition of a 'guide coat' pigment, mixed into the Primer.

To do this, apply the first layer of PCP Polyester Pattern-Coat™ Primer as described above (either by brush or spray gun) and allow to cure to a 'B-Stage' where it is firm but still slightly tacky, before mixing pigment in with a second batch of PCP Polyester Pattern-Coat™ Primer and applying as above. This will not only result in a thicker application of Primer (allowing plenty of material to flat down through) but it will also alert you when you are down through the first layer of Primer and into the second layer meaning you can choose to stop and apply an additional layer of Primer if you choose or avoid breaking through in thinner areas.

Flattening

Once cured (around 3 hours, depending on ambient temperature) it can be wet-sanded and flattened using 120 then 240 grit abrasive papers to start to develop the smooth accurate lines of the pattern. If necessary additional coats of the Primer can be applied and then flattened back until satisfactory.

Using without PCG Polyester Pattern-Coat™ Hi-Gloss

Where only a reasonable level of gloss on the pattern is acceptable then PCP Polyester Pattern-Coat™ Primer can be flattened and polished up to a smooth, medium gloss finish on its own.

- Wet-sand using increasingly fine abrasive papers (240, 400, 800, 1200) remembering to change the water when you change grits.
- Wait for the PCP Polyester Pattern-Coat™ Primer to cure fully (around 25hrs) before polishing using a power polisher.
- PCP Polyester Pattern-Coat™ Primer can be finished to a reasonable level of gloss using a polishing compound such as NW1 White Super Cutting Compound .
- Following the application of a suitable release agent (such as Wax, PVA or Chemical Release Agent) moulds can be taken directly from the PCP Polyester Pattern-Coat™ Primer finish.

Using with PCG Polyester Pattern-Coat™ Hi-Gloss

Where a high level of gloss or harder surface is required on the pattern then we recommend finishing the PCP Polyester Pattern-Coat™ Primer to around a 120 grit abrasive paper and then coating with PCG Polyester Pattern-Coat™ Hi-Gloss before flattening and polishing to a very high gloss finish.

Transport and Storage

Resin and hardener should be kept in tightly seal containers during transport and storage. Both the resin and hardener should be stored in ambient conditions of between 10°C (50°F) and 25°C (77°F). Polyester solutions contain volatile and flammable monomers such as styrene and should be handled and used in a well ventilated, flame proof area.

KEEP THE PACKING TIGHTLY SEALED WHEN NOT IN USE.

If stored under the above conditions the resin and hardener will have a shelf life of 3 months, from the date of production.

Disclaimer

This data is not to be used for specifications. Values listed are for typical properties and should not be considered minimum or maximum.

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