

PROTITE

EPOXY RESIN

DURABLE CLEAR FINISH

GLASS COAT KIT



MODEL PF-FRGC0750

Instruction User Manual & Warranty

CAUTION: Always read instructions and safety data sheets before using this product and retain for future reference

Thank you & Congratulations on the purchase of your Protite Glass Coat 750ml Kit.

To find out more information on this product please visit www.protite.com.au or contact:

Tradeware

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SAFETY & DISPOSAL

KEEP OUT OF REACH OF CHILDREN. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

Wear appropriate protective clothing, eye/face protection and gloves. Use in sufficiently ventilated area.

FOR FIRE: If involved in a fire, use water fog, foam or dry agents. Avoid breathing products of combustion.

FOR SPILLS: Slippery when spilt. Clean with water and detergent. If a large spill, use absorbent material like sand.

FIRST AID: If poisoning occurs, contact a doctor or poisons information centre (AU 13 11 26 NZ 0800 764 766). If medical advice is needed, have product container or label at hand.

SWALLOWED: If swallowed, rinse mouth. Do NOT induce vomiting. Give a glass of water and immediately seek medical advice.

EYE: If in eyes, hold eyes open and flush with running water for at least 15 minutes and seek medical advice. **SKIN:** If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If irritation occurs, seek medical advice.

DO NOT REUSE CONTAINERS.

FOR A COPY OF THE SAFETY DATA SHEETS, VISIT THE PROTITE WEBSITE OR CONTACT TRADEWARE.

EMERGENCY 13 11 26 (AU POISONS INFORMATION CENTRE)

EMERGENCY 0800 764 766 (NZ POISONS INFORMATION CENTRE)

PRIOR TO STARTING, ENSURE INSTRUCTIONS AND MATERIAL SAFETY DATA SHEETS ARE READ AND THOROUGHLY UNDERSTOOD PRIOR TO USE OF THIS PRODUCT.

GLASS COAT KIT INCLUDES



Part A: Resin



Part B: Hardener



Instruction Manual

COVERAGE

Product	Consisting of:	Coverage
Glass Coat 750ml	500ml Resin and 250ml Hardener	0.75 - 1.5m ² *

*750ml Glass Coat will typically cover 0.75m² at 1mm thick or 1.5m² at 0.5mm thick subject to substrate porosity. One coat is equivalent to 60 coats of ordinary varnish (at 1mm thick). One coat will usually be enough, but multiple coats may be used if required.

Note: This presumes that all the contents of the Resin and Hardener bottle will be used in one application. For details on how to measure and combine Glass Coat Resin and Hardener for your projects, see 'How to measure out Glass Coat' on page 5.

WHAT YOU NEED TO BEGIN

- Protite Glass Coat Resin (Part A)
- Protite Glass Coat Hardener (Part B)
- A suitable clear polyurethane sealer is required if surface is to come in contact with food.
- Disposable mixing containers – large enough to hold the total mixed volume
- 2 measuring bowls
- Masking tape
- A spreader or a disposable paint brush
- Aluminium foil, plastic sheeting or wax paper (to catch any drips or spills and to be positioned underneath your project)
- Appropriate protective clothing, safety gloves, safety glasses and any other eye/face protection
- A propane/butane torch (to de-gas)
- Epoxy thinner (to clean-up)
- A penetrating pore sealer is required if working with porous timber such as Cabot's timber sealer
- A dark filler is required if any cracks require filling

PREPARATION

WORKSTATION

Ensure your workstation has adequate ventilation – do not use in an enclosed or confined area.

For best results, room temperature should be $>20^{\circ}\text{C}$. It is best to work in an area that has low humidity (less than 60%), and is dust and lint free.

Clean the surface that will be coated. It's important that it is dry and free from dust, grease, wax and oil.

SEALING

If timber is porous we recommend sealing prior to applying Glass Coat. Use a penetrating pore sealer to lock in tannin and oils, for example Cabot's timber sealer. After treatment, avoid contaminating the surface. Try not to touch the surface with your fingers.

Once the surface has fully dried, fill any cracks with a filler. (We recommend using a dark filler as this will look more natural).

OTHER

Ensure the surface is level, and any cracks or voids are sealed to prevent running.

Using a low tack (silicon treated) masking tape, mask the edges of the surface to be treated. Take the masking tape up to the leading edge of the surface, ensuring that it is not sitting proud above the edge. This is likely to cause the Glass Coat to well up against the tape, which will create a problem after pouring. Since Glass Coat is a pouring medium rather than a painting medium, it is important not to impede the flow of liquid over the edges.

If you have deep sides that need protecting from any overflow of poured Glass Coat, you can build a skirt around the perimeter by adhering some paper or plastic film to the underside of the masking tape.

Use tape to cover areas of the project you do not want coated.

The surface to be coated should be elevated about 5cm above the work area to allow the coating to drip freely over the edges (if necessary).

Place aluminium foil, plastic sheeting or wax paper under the item to catch drips.

Cloths and rags should be on hand to capture drips or spills. Soiled cloths and rags should be disposed of and cannot be reused.

Note: It is challenging to remove Glass Coat once it sets. Epoxy thinners can be used to clean up any drips/spills.

APPLICATION

Step 1: Combine the contents

Calculate the area to be coated to work out your coverage requirements.

If your product needs:

Full coverage supplied by Glass Coat 750ml:	- Mix the entire contents of Glass Coat Resin (Part A) and Glass Coat Hardener (Part B) bottles supplied, in the same clean container.
Less coverage than that supplied by this kit (i.e. 0.75m ²), or you would like to practice applying on a spare piece of wood before starting your project:	- Mix up a small amount of Glass Coat (see how to measure using the chart provided below) and keep each component in its original, separate containers. - Do not mix the full contents of Glass Coat Resin (Part A) and Glass Coat Hardener (Part B), as once mixed, any left over contents may become hot, set quickly and will not be usable for future projects.
Larger quantities of Glass Coat:	- Buy extra kits as required and apply in batches as described below.

How to measure out Glass Coat

Incorrect measuring will result in a less than satisfactory result and spoil the project.

- Calculate surface area of product to be coated.
- Calculate Glass Coat volume needed as a 2:1 ratio of Resin to Hardener
- Pour the correct amount of Part A (Resin) into a measuring bowl. For best results, we suggest using a disposable plastic measuring bowl.
- Pour the correct amount of Part B (Hardener) into another measuring bowl.
- Combine your measured volume of Part A (Resin) and Part B (Hardener) into one mixing container and follow the 'Blend Instructions' noted below.

Note: Putting extra Hardener in will not make the surface harder. Mix the material as close to the correct ratio of 2:1 as possible to get the best results. Adding too much of either Resin or Hardener will result in the final film being soft.

Measuring Guide*

M2	Resin (L/ml)	Hardener (L/ml)	
1.25	834ml	417ml	
1	667ml	333.5ml	
0.75	500ml	250ml	Use full bottle of both from 750ml kit
0.50	333ml	166.5ml	
0.25	166ml	83ml	

*750ml Glass Coat will typically cover 0.75m² at 1mm thick or 1.5m² at 0.5mm thick subject to substrate porosity.

Step 2: Blend

CAUTION: The product will not cure as wanted if mixing directions are not correctly followed.

Mix combined product with a flat spatula/stirrer until the material is thoroughly blended and homogeneous, scraping down sides and stirring slowly. Avoid excessive vigorous mixing that may introduce air bubbles into the mixture. If material is not sufficiently mixed the final product will not achieve its full cure and may remain soft or sticky.

Note: It is important to mix both parts thoroughly as if mixing two different colours. As the mixture is clear you may think it is mixed when it's not. We recommend using 2 containers – start by mixing the Glass Coat solution (Combined Part A Resin and Part B Hardener) in the first mixing container, and after a minute transfer to the second container to mix for another minute. The mixture should be ready after two minutes of careful mixing.

STAINING

A few drops of Protite pigment can be added to Glass Coat to change the colour if required. As a guide for 100ml of Glass Finish 2ml of pigment is enough to result in a bright look to Glass Coat. Any more will result in the surface being soft and sticky and it won't cure.

If you want a deeper colour finish this can be achieved by staining the timber surface directly before applying Glass Coat and also applying the pigment to Glass Coat.

Step 3: Pour & Roll Out

Once the product is adequately mixed, pour evenly over the surface that is to be coated. It will self-level, but if the surface you coat isn't level and flat, the Glass Coat may spread unevenly and run off. Pour all of the mixed Glass Coat in the first few minutes after mixing. If the mixed product is left in the mixing container longer than 5 minutes, it will become hot and set rapidly.

For best results, make a border with the mixture (around 3cm from the outer edge) and then generously fill in the area from the centre with the Glass Coat mixture, do not apply a small amount. Glass Coat will self-level, however a spreader may need to be used to spread the Glass Coat to the edge across the surface.

To guarantee best results, use a small brush to clean the edges right away. Vertical edges can remain free from Glass Coat running down them by laying tape so that the edge is flush with the top of the surface being coated. The Glass Coat will flow to the edge and naturally create a rounded edge.

Step 4: De-gas

It is normal for bubbles to appear after the pour and many may pop as the Glass Coat spreads across the surface. For remaining bubbles, on a small project gently blow the surface. If this isn't effective or for larger projects use a propane torch.

Using a propane torch

From about 20cm above the surface using a low flame, move the torch across the area to ensure the whole surface has been de-gassed. This guarantees all bubbles are removed prior to curing. Do not hold the torch too close to the surface or in one area for too long as the flame may burn the surface and damage your work.

Note: Bubbles are burst with carbon dioxide, not heat. Do not use other devices like a hair dryer or a heater.

Bubbles need to be removed in the first 20 minutes. If you attempt after this time it will result in an uneven surface.

Step 5: Leave to Cure

After approximately 12 hours the surface will be touch dry.

It is best not to place anything on the surface for at least 3 days.

Remove any masking tape from the edges of the project before the surface dries but after the Glass Coat has stopped flowing down the sides of the project – which takes approx. 5 hours. If removing the tape lifts the edge up, the edge will flow back and set OK.

For best results, allow material to cure in a dust free environment for 24 -72 hours. For optimal results ambient temperature should be 20–30°C.

After 7 days full curing of this product is achieved.

PRECAUTIONS FOR LARGE SURFACE AREA PROJECTS

Please take precaution when applying Glass Coat to large areas such as benches or work tops.

1. Practice applying on a spare piece of timber

Please see instructions on page 5 on how to measure the small quantity of Glass Coat you will require. Practice applying on this piece of timber before moving on to your larger project.

2. Seal the surface

If timber is porous we recommend sealing the surface before applying Glass Coat, as timber contains extractives and natural oils which may seep out and dissolve resulting in undesirable results.

See page 4 which outlines 'Preparation' for sealing directions.

3. Use a filler to fill cracks after sealing

For a natural best result finish use a dark filler.

4. Carefully calculate Glass Coat required

Once you have measured how much Glass Coat you will require, mix it thoroughly before you start to pour. Once you start to pour the Glass Coat you have approx. 20 minutes before it begins to cure.

For very large projects its best to work in batches mixing a 750ml pack, pour, spread and de-gas using a gas flame. Then while waiting for this area to cure, prepare the second batch in the same way.

It's important to note that Glass Coat cures by a chemical reaction and if you make large volumes at once in a container it will become hot which will cause the Glass Coat to set much faster and therefore reduce the life span of the product. Working in batches will prevent this.

5. Work in a team

For large projects having a second or third person to help apply the Glass Coat and each take a section can make the project much easier to complete.

6. Professional support

For commercial jobs, large projects or when dealing with valuable items its recommended to use a professional applicator.

GLASS COAT USES

Once the surface is fully sealed Glass Coat may be used on multiple surfaces as follows.

It may be difficult for Glass Coat to adhere to polished, non-porous surfaces or vitreous enamel, and therefore best not to use on these.

It is not appropriate to use on exterior surfaces as direct sunlight can cause the Glass Coat to yellow in time.

- Wood
- Rocks
- Paper
- Metal
- Plastics
- Fabric
- Painted Surfaces
- Decals
- Oil Paints
- Bisque
- Dried Flowers
- Straw Flowers
- Bread
- Models
- Transfers
- Figurines
- Styrofoams
- Pine Cones

DECOUPAGE

Ensure the decoupage is fully dry before applying 1 coat of the water-based sealer. Solvent based sealers should not be used as they may cause the ink to run.

It is best to test the sealer on another item before using it for your project work.

When the sealer is fully dry, apply Glass Coat as per application instructions on page 5.

NEWSPRINT, PHOTOGRAPHS & THE LIKES

Apply 1 coat of the water-based sealer to seal the surface. Fix the item on a surface using craft glue and let it dry fully.

Next follow instructions for 'Decoupage' above.

Note: For photographs its essential to use a water-based sealer as there are chemicals on the surface of them.

MOULDING OR CASTING

Glass Coat can be used for casting or moulding for 3 dimensional items.

Ensure there are no holes or cracks on the mould.

If possible, use a flexible substance to create your mould such as Selleys No More Gaps - this will make it easier to take the mould off after the Glass Coat has cured.

Pour the Glass Coat on the mould while rotating the mould slowly allowing it to cover the entire surface.

For large moulds it is best to do it in sections as the Glass Coat will stick to itself.

Before applying the next batch allow it to cure.

During the curing process, place the mould in a stable out of reach place so it won't tip over.

Note: Pot life and drying time are greatly reduced when Glass Coat is used in casting. (As opposed to pouring it over a surface) Casting will also get very hot as the Glass Coat cures.

CLEANING UP

Clean up any drips or spills immediately using Epoxy Thinners.

Once Glass Coat has cured, it can only be removed using an epoxy stripper.

Once the surface is fully dry, rough edges can be removed using a sharp blade or with sandpaper. If sanding use a face mask and do so in a ventilated space.

MAINTENANCE

Once the Glass Coat is fully cured, the surface can be cleaned down with a soft damp cloth.

Do not place hot items onto the Glass Coat as they may damage or discolour the surface.

Do not use abrasive cleaners on the surface, only mild detergent. Even though Glass Coat is hard when fully cured, if used as a cutting surface it will scratch easily. If scratches do occur, lightly sand the surface and reapply one coat of Glass Coat as per application instructions.

Any Resin (Part A) or Hardener (Part B) that wasn't used should be stored in a cool dark place away from sunlight.

FOOD SAFE

To ensure a truly food safe surface, we recommend coating it with a 2 part non yellowing polyurethane or acrylic. This allows it to be safe for intermittent food use lower than 30°C.

ISSUE	CAUSE	FIX
Bubbles appear in the final cured surface.	Not de-gassed enough to remove bubbles which developed during the mixing and pouring stage.	Sand the surface to remove the coating and reapply one coat of Glass Coat following the application instructions, paying attention to de-gas thoroughly while the coating is still a liquid.
The surface has not hardened fully.	The ratio of Resin (Part A) and Hardener (Part B) was not correct.	Lightly sand it, remove all dust and apply a second coat of Glass Coat, ensuring that the mix ratio of Resin (Part A) and Hardener (Part B) is correct. Refer to 'How to measure out Glass Coat' on page 5.
The surface has not hardened uniformly.	Resin (Part A) and Hardener (Part B) were not mixed enough.	Lightly sand it, remove all dust and apply a second coat of Glass Coat, ensuring that both the Resin (Part A) and Hardener (Part B) are mixed thoroughly.
Sections where the surface has pulled away showing the substrate.	Surface pollution.	Use methylated spirits to clean the surface. Once fully dry, lightly sand it, remove all dust and apply a second coat of Glass Coat.
Dimples showing on the surface once dry.	The bubbles weren't popped on time.	Lightly sand it, remove all dust and apply a second coat of Glass Coat. Follow Step 4 'De-gas' accurately.
The Glass Coat has dripped over the edge of the project and coated nearby surfaces.	Drop sheet didn't cover areas you didn't want the product to go.	Take off cured Glass Coat by sanding or scraping it (manual or electric) off where you don't want it. Wear appropriate safety equipment and work in a ventilated space.
Glass Coat has started to peel off as it was used on ceramic tiles or non-porous surface.	Glass Coat is not suitable for highly polished or non-porous surfaces.	Take off cured Glass Coat by sanding or scraping it (manual or electric) off where you don't want it. Wear appropriate safety equipment and work in a ventilated space.
Glass Coat looks yellow colour over time.	Direct sunlight may result in Glass Coat turning yellow over time.	Yellowing has no effect on how Glass Coat performs. If undesired it can be removed by sanding or scraping it off (manual or electric). Wear appropriate safety equipment and work in a ventilated space. Apply one coat of Glass Coat following the application instructions. Refrain from exposing the finished project to direct sunlight.
Resin (Part A) and Hardener (Part B) looks yellow colour.	Exposure to or keeping in direct sunlight.	This yellow colour will not impact the properties of the coating. Its advisable to sample on a similar surface to see if a yellow tone is seen once cured.



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