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Introduction

We all know that to produce the very best mouldings, that the process begins with a top quality plug and mould. As Europe's leading composites solution provider, Euroresins are proud to introduce **PerfectPlug** - a complete range of plug preparation materials, ensuring that the very best quality surface finish can be achieved on patterns and plugs.

The **PerfectPlug** range complements our Neomould 1982-S non-shrink mould making resin system, together with our tooling gelcoats.

The **PerfectPlug** range consists of 5 elements, offering the customer total flexibility to achieve the best adesired finish.

- Easy Sealer
- Hi Build Primer
- Surface Primer
- Finishing Primer
- Hi Gloss Coating
- Hi Gloss Coating

Easy Sealer ensures a chemical bond, as well as a good mechanical bond between the substrate and primer. Following is a choice of three primers, selection depends upon the quality of the plug substrate and required finish of the mould.

If starting with a substrate which has uneven or rough surfaces, then Hi Build Primer would be the preferred option. With better finished, more uniform substrates, our Surface Primer option can be applied.

Once primed with either of these grades the customer can then achieve a Class A finish with the application of our Hi Gloss Black or Green Coating.

For less critical finishes it's possible to use our Finishing Primer, which can fulfil the dual role of both base and surface primer without the need of the Hi Gloss Coating.

Easy Sealer

Introduction

PerfectPlug Easy Sealer is a clear low viscosity liquid designed to seal porous surfaces prior to the application of PerfectPlug primer or lacquer systems. Easy Sealer allows good bonding to take place and helps prevent problems associated with interlaminar adhesion.

Easy Sealer is supplied in a viscosity ready to use and only needs a 2% addition of medium reactive MEKP to cure tack free.

Application

Best results are achieved when the surface has been abraded with between 80 - 120 grit. Prior to application ensure the substrate is free from dust and debris however, **DO NOT** use tack rags. Catalyse Easy Sealer with 2% medium reactive MEKP. Due to the high reactivity and rapid gel time, care should be taken to only catalyse sufficient material that can be applied within a time frame of fifteen minutes.

Whilst application can be made by brushing or spraying the best method of application is by roller. After application ensure all excess Easy Sealer is removed from the surface and leaves no puddles. **DO NOT** use a tack rag.

Depending on application conditions, Easy Sealer should be ready for overcoating in 1-2 hours. Easy Sealer does not require abrading prior to subsequent primer or lacquer.

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Hi Build Primer

Introduction

PerfectPlug Hi Build Primer is a cream-coloured sprayable base primer for plugs and patterns. Its high build properties are ideal for priming rough or uneven surfaces, providing a solid base for PerfectPlug High Gloss Coating.

Characteristics

Due to the filler content and low viscosity, a sediment may occur on standing. Hi Build Primer should be mixed thoroughly prior to use.

Hi Build Primer is supplied in a ready-to-spray viscosity. However, if solvent is lost through the re-mixing process, small amounts of Ethyl Acetate, Acetone or Methyl Ethyl Ketone (Whichever is most readily available) at >5% may be added.

Hi Build Primer is designed as a primer system for most substrates. However, some absorbent substrates may need the application of PerfectPlug Easy Sealer prior to application of the primer.

Preparation

Whilst not always necessary, best adhesion to the surface by the primer is achieved by abrading the substrate with 80-120 grit paper. Alternatively PerfectPlug Easy Sealer can be used to seal the surface, in which case no abrasion of the substrate is necessary.

Before application of the primer, **ALWAYS** remove dust and grease by wiping the substrate with solvent. This practice is not necessary when using PerfectPlug Easy Sealer if the primer is being sprayed whilst the sealer is still tacky.

Application

Due to the filler content and low viscosity of the primer a sediment may occur; for best results, re-disperse the primer with a mechanical mixer. It is important even if only a small quantity is to be decanted from the tin that the whole tin is fully re-dispersed. This procedure must be performed each time the primer is used. Failure to comply with the re-dispersing procedure may lead to application and sanding problems which ultimately jeopardise the overall quality of the finished article.

On re-dispersion of the primer, it should be of a viscosity that is ready to spray through conventional gravity feed or pressure pot paint gun systems. If however, through the re-dispersion process the primer has thickened slightly, it is possible to add additional solvent to achieve a sprayable viscosity. As a guide >5% of either Acetone, Ethyl Acetate or MEK can be used to lower viscosity, but where more than 5% solvent is required seek advice from Euroresins Technical Department.

Application, cont.

Hi Build Primer is designed to cure at an ambient temperature above 16°C with 2% of medium reactivity MEKP (Curox M-302 type).

At an ambient temperature of 20°C Hi Build Primer will give a spray pot life of approximately 20 minutes. Pot life will vary depending on the temperature; shortening as temperature increases and lengthening as temperature drops; therefore, only catalyse sufficient primer that can be applied in the pot life application window.

It is recommended that a 1.8 - 2mm gun nozzle is used when using conventional gravity feed or pressure pot spray systems at between 40-70 psi. If air pressure is too high it can lead to rippling of the surface and air entrapment within the film. Whilst these are recommendations, each application shop will be different and therefore methodology may change from shop to shop.

Best application results are achieved by applying a 'Tack' or 'Dust' coat to the entire surface of the substrate and then continuing with wet passes of up to 250 micron each pass until the desired thickness is reached at up to 2000 microns. If too high a film thickness is achieved on each pass, air entrapment may lead to porosity when rubbing down on completion; and if a total film thickness of over 2000 microns is achieved; slippage or sagging may occur.

Film gelation should occur within 45 minutes at an ambient temperature of 20°C. Film gel time will be significantly affected by ambient temperature; decreasing with an increase in temperature and increasing with a drop in temperature.

Films should be ready for sanding within 4 - 5 hours depending on ambient temperature.

Spray equipment can be cleaned with Acetone, Ethyl Acetate or MEK.

Finishing

Once cured, the primer lends itself to many surface finishes ranging from a matt, semi-matt, gloss to high gloss (with the application of a PerfectPlug Hi Gloss).

Hi Build Primer can be simply abraded back with various grit papers to achieve different levels of gloss:

- Achieve required contour with low grit paper 220 - 400:
- For a matt finish: finish the plug with 400 - 800 grit papers;
- For semi matt finish use 800 - 1200 papers;
- For a gloss finish use 1200 paper and fine cutting paste;
- For ultimate high gloss finish: abrade with 400, 800 and 1200 papers and then apply PerfectPlug High Gloss.

Technical Data

Colour:	Cream
Specific Gravity:	1.45/cc +/- 0.05g
Viscosity:	380 - 500 Cps
Thixotropic Index:	3 - 3.5
Pot gel time:	100gms @ 25°C with 2% M50 14 - 19 minutes
Film gel time:	2% M50 @ 20°C <60 minutes
Coverage:	5 Ltr / 13m2 / 250µ

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Surface Primer

Introduction

PerfectPlug Surface Primer is a light grey, sprayable primer system for plugs and patterns. Due to the filler content and low viscosity, a sediment may occur on standing. Surface Primer should be re-dispersed using a mechanical mixer for best results.

Characteristics

Surface Primer is supplied in a ready-to-spray viscosity - however, if solvent is lost through the re-mixing process, small amounts of either Ethyl Acetate, Acetone or Methyl Ethyl Ketone, (whichever is most readily available) may be added at >5%.

Surface Primer is designed as a primer system for most substrates. However, some absorbent substrates may need the application of PerfectPlug Easy Sealer prior to application of the primer.

Preparation

Whilst not always necessary, best adhesion to the surface by the primer is achieved by abrading the substrate with 80-120 grit paper. Alternatively PerfectPlug Easy Sealer can be used to seal the surface, in which case no abrasion of the substrate is necessary.

Before application of the primer, **ALWAYS** remove dust and grease by wiping the substrate with solvent. This practice is not necessary when using PerfectPlug Easy Sealer if the primer is being sprayed whilst the sealer is still tacky.

Application

Due to the filler content and low viscosity of the primer a sediment may occur; for best results, re-disperse the primer with a mechanical mixer. It is important even if only a small quantity is to be decanted from the tin that the whole tin is fully re-dispersed. This procedure must be performed each time the primer is used. Failure to comply with the re-dispersing procedure may lead to application and sanding problems which ultimately jeopardise the overall quality of the finished article.

On re-dispersion of the primer, it should be of a viscosity that is ready to spray through conventional gravity feed or pressure pot paint gun systems. If however, through the re-dispersion process the primer has thickened slightly, it is possible to add additional solvent to achieve a sprayable viscosity. As a guide >5% of either Acetone, Ethyl Acetate or Methyl Ethyl Ketone can be used to lower viscosity, but where more than 5% solvent is required seek advice from Euroresins Technical Department.

Surface Primer is designed to cure at an ambient temperature above 16°C with 2% of a medium reactivity Methyl Ethyl Ketone Peroxide (Curox M-302 type).

Application, cont.

At an ambient temperature of 20°C, Surface Primer will give a spray pot life of approximately 20 minutes. Pot life will vary depending on the temperature; shortening as temperature increases and lengthening as temperature drops; therefore, only catalyse sufficient primer that can be applied in the pot life application window.

It is recommended that a 1.8 - 2mm gun nozzle is used when using conventional gravity feed or pressure pot spray systems at between 40-70 psi. If air pressure is too high it can lead to rippling of the surface and air entrapment within the film. Whilst these are recommendations, each application shop will be different and therefore methodology may change from shop to shop.

Best application results are achieved by applying a 'Tack' or 'Dust' coat to the entire surface of the substrate and then continuing with wet passes of up to 250 micron each pass until the desired thickness is reached at up to 2000 microns. If too high a film thickness is achieved on each pass, air entrapment may lead to porosity when rubbing down on completion; and if a total film thickness of over 2000 microns is achieved; slippage or sagging may occur.

Film gelation should occur within 45 minutes at an ambient temperature of 20°C. Film gel time will be significantly affected by ambient temperature; decreasing with an increase in temperature an increasing with a drop in temperature.

Films should be ready for sanding within 4 - 5 hours depending on ambient temperature.

Spray equipment can be cleaned with Acetone, Ethyl Acetate ot MEK (Methyl Ethyl Ketone).

Finishing

Once cured, the primer lends itself to many surface finishes ranging from a matt, semi-matt, gloss to high gloss (with the application of a PerfectPlug Hi Gloss Coating).

Surface Primer can be simply abraded back with various grit papers to achieve different levels of gloss:

- Achieve required contour with low grit paper 220 - 400:
- For a matt finish: finish the plug with 400 - 800 grit papers;
- For semi matt finish use 800 - 1200 papers;
- For a gloss finish use 1200 paper and fine cutting paste;
- For ultimate high gloss finish: abrade with 400, 800 and 1200 papers and then apply PerfectPlug High Gloss.

Technical Data

Colour:	Grey
Specific Gravity:	1.45/cc +/- 0.05g
Viscosity:	380 - 500 Cps
Thixotropic Index:	3 - 3.5
Pot gel time:	100gms @ 25°C with 2% M50 14 - 19 minutes
Film gel time:	2% M50 @ 20°C <60 minutes
Coverage:	5 Ltr / 13m2 / 250µ

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Finishing Primer

Introduction

PerfectPlug Finishing Primer is a dark grey, sprayable primer system for plugs and patterns. Due to the filler content and low viscosity, a sediment may occur on standing. Finishing Primer should be re-dispersed using a mechanical mixer for best results.

Characteristics

Finishing Primer is supplied in a ready-to-spray viscosity - however, if solvent is lost through the re-mixing process, small amounts of either Ethyl Acetate, Acetone or Methyl Ethyl Ketone, (whichever is most readily available) may be added at >5%.

Finishing Primer is designed as a primer system for most substrates. However, some absorbent substrates may need the application of PerfectPlug Easy Sealer prior to application of the primer.

Preparation

Whilst not always necessary, best adhesion to the surface by the primer is achieved by abrading the substrate with 80-120 grit paper. Alternatively PerfectPlug Easy Sealer can be used to seal the surface, in which case no abrasion of the substrate is necessary.

Before application of the primer, **ALWAYS** remove dust and grease by wiping the substrate with solvent. This practice is not necessary when using PerfectPlug Easy Sealer if the primer is being sprayed whilst the sealer is still tacky.

Application

Due to the filler content and low viscosity of the primer, a sediment may occur; for best results, re-disperse the primer with a mechanical mixer. It is important even if only a small quantity is to be decanted from the tin that the whole tin is fully re-dispersed. This procedure must be performed each time the primer is used. Failure to comply with the re-dispersing procedure may lead to application and sanding problems which ultimately jeopardise the overall quality of the finished article.

On re-dispersion of the primer, it should be of a viscosity that is ready to spray through conventional gravity feed or pressure pot paint gun systems. If however, through the re-dispersion process the primer has thickened slightly, it is possible to add additional solvent to achieve a sprayable viscosity. As a guide >5% of either Acetone, Ethyl Acetate or Methyl Ethyl Ketone can be used to lower viscosity, but where more than 5% solvent is required seek advice from Euroresins Technical Department.

Finishing Primer is designed to cure at an ambient temperature above 16°C with 2% of a medium reactive Methyl Ethyl Ketone Peroxide (Curox M-302 type).

Application, cont.

At an ambient temperature of 20°C Finishing Primer will give a spray pot life of approximately 20 minutes. Pot life will vary depending on the temperature; shortening as temperature increases and lengthening as temperature drops; therefore, only catalyse sufficient primer that can be applied in the pot life application window.

It is recommended that a 1.8 - 2mm gun nozzle is used when using conventional gravity feed or pressure pot spray systems at between 40-55psi. If air pressure is too high it can lead to rippling of the surface and air entrapment within the film. Whilst these are recommendations, each application shop will be different and therefore methodology may change from shop to shop.

Best application results are achieved by applying a 'Tack' or 'Dust' coat to the entire surface of the substrate and then continuing with wet passes of up to 250 micron each pass until the desired thickness is reached at up to 1000 microns. If too high a film thickness is achieved on each pass, air entrapment may lead to porosity when rubbing down on completion; and if a total film thickness of over 1000 microns is achieved; slippage or sagging may occur.

Film gelation should occur within 45 minutes at an ambient temperature of 20°C. Film gel time will be significantly affected by ambient temperature; decreasing with an increase in temperature an increasing with a drop in temperature.

Films should be ready for sanding within 4 - 5 hours depending on ambient temperature.

Spray equipment can be cleaned with Acetone, Ethyl Acetate ot MEK (Methyl Ethyl Ketone).

Finishing

Finishing Primer can be simply abraded back with various grit papers to achieve different levels of gloss:

- Achieve required contour with low grit paper 220 – 400:
- For a matt finish: finish the plug with 400 – 800 grit papers;
- For semi matt finish use 800 – 1200 papers;
- For a gloss finish use 1200 paper and fine cutting paste;
- When moulding from a matt or semi matt surface, Euroresins would recommend using a hard mould release wax in conjunction with a PVA release agent – please contact our sales office for further details.

Technical Data

Colour:	Grey
Specific Gravity:	1.3g/cc +/- 0.05g
Viscosity:	380 - 500 Cps
Thixotropic Index:	3 - 3.5
Pot gel time:	100gms @ 25°C with 2% M50 14 - 19 minutes
Film gel time:	2% M50 @ 20°C <60 minutes
Coverage:	5 Ltr / 13m2 / 250µ

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Hi Gloss Coating

Introduction

PerfectPlug Hi Gloss Coating is a pre-accelerated polyester lacquer for plug finishing, supplied in two colours: Black or Green.

Characteristics

Hi Gloss Coating has been developed as a finishing coat for the manufacture of plugs and production tools. Hi Gloss Coating can be applied to multiple surfaces including marine ply, MDF board, polyester topcoat or ideally, Hi Build or Surface primers.

Care must be taken to ensure any surface to which Hi Gloss Coating is to be applied has been correctly abraded, cleaned and is free from dust and dirt. Euroresins recommends the customer carry out a small trial with Hi Gloss Coating and the required substrate to check for compatibility and suitability.

Application

Hi Gloss coating is supplied in a state that requires the addition of 2% medium reactivity methyl ethyl ketone peroxide (MEKP) to be ready for spraying through a gravity feed or pressure pot paint spray gun with 1·8mm - 2mm nozzle. Additional solvent should not be required. However; if necessary a viscosity adjustment can be achieved with the addition of > 5% amount of Ethyl Acetate, MEK or Acetone.

Once Hi Gloss coating has been catalysed at 2%, a working time of approximately 14 to 19 minutes should be achieved depending on temperature. Hi Gloss coating can be applied in several coats of 200 - 300 gm² up to a total thickness of 800 - 900 gm².

For best results the sanding and polishing procedures should take place following a 48 hour drying period