



GLOBAL REFINISH
SYSTEM



June 2011

Product Information



ENVIROBASE HIGH PERFORMANCE

*Envirobase Waterborne Basecoat colour T4xx
Envirobase Thinner T494
Envirobase Slow Thinner T495
High Performance Additive T492*

PRODUCTS

Envirobase High Performance is waterborne basecoat mixing scheme that significantly reduces solvent emissions into the environment and complies with all current and future legislative requirements.

Applied as a part of a two-stage or multi-stage basecoat paint system, mixed Envirobase High Performance colour reproduces original solid, metallic, mica or special effect paint finishes, giving excellent covering power and fade out capability.

In conjunction with high quality PPG Clearcoats and Primers, the Envirobase High Performance system delivers excellent gloss and durability. Easy to use, this is a simple and flexible system capable of high quality vehicle repairs.

ENVIROBASE HIGH PERFORMANCE EXPRESS

This is the system to use where high productivity is required. It incorporates accelerated, warm air movement over the surface of the paint film during the flash off periods.

The system raises the booth temperature to between 40 - 45°C during the Envirobase High Performance flash-off period, thereby reducing humidity by about 50%. This process / system has a different application process to the normal

Envirobase High Performance application.

By using the Envirobase High Performance Express system, application & drying times can be dramatically reduced, giving quicker process times.

PREPARATION OF SUBSTRATE

Apply over original stoved 2K finishes, or a range of PPG GRS Deltron primers - refer to primer TDS for specific recommendations. The use of GreyMatic primers is recommended for optimum results. **Note:** Do not apply over 2K Etch Primers



Degrease all surfaces to be painted with appropriate PPG waterborne substrate cleaner before wet sanding with P800 grade paper or dry sanding with P500 grade paper.



Wash off residues and dry thoroughly before re-cleaning with appropriate waterborne PPG precleaner see - Technical Data Sheet **Deltron Cleaners RLD63V**. The use of a tack-rag is recommended.

PRE-APPLICATION

Hand-shake bottles of Envirobase High Performance tinters for a few seconds before use. Do not shake vigorously.

Mixed Envirobase High Performance colour should be thoroughly hand-stirred before application. If not used immediately it should be hand-stirred again before use.

Use nylon paint filters specially designed for use with waterborne paint materials. A 125 micron mesh is recommended, 190 microns maximum.

MIXING RATIOS

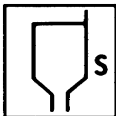
Mixing Ratios with Envirobase High Performance Colour

| | <u>By Volume</u> |
|-------------------------------------|------------------|
| Envirobase Solid Colours | 100 Vols |
| Thinner T494/T495 | 10 Vols |
| Envirobase Metallic or Mica Colours | 100 Vols |
| Thinner T494/T495 | 20 Vols |

Thinner selection Below 35°C T494 Above 35°C T495

At high temperatures, (above 30°C), 30% of thinner may be used to help application, laydown and overspray absorption.

Note: If the 10% thinner addition is used, then it is very important to strictly observe the flash off times between coats and before the application of clearcoat.



Viscosity will vary with the thinner level chosen, but the ideal application viscosity is 22 - 26 seconds / DIN4 / 20°C

Potlife: 3 months. Stir well before use



ENVIROBASE HIGH PERFORMANCE - STANDARD PROCESS

APPLICATION, FLASH-OFF AND DRYING



Spraygun set-up:

1.2 - 1.3 mm fluid tip

Set pressure according to manufacturers recommendations

Application:

Apply single coats until opacity is obtained.
Flash off thoroughly between coats.
Air movers can be used to accelerate drying

Metallic control coat

For optimum metallic control, apply control coat at a spraygun inlet pressure of 1.2 - 1.5 bar onto a dry film. For optimum process speed, the control coat may be applied onto a "half dry" film once opacity is reached

*Flash-off at 20°C
60% relative humidity:
- before clearcoat*

Basecoat must be uniformly matt and dry before application of clearcoat.

Total dry film build:

10 - 20 µm

ENVIROBASE HIGH PERFORMANCE - EXPRESS PROCESS

APPLICATION, FLASH-OFF AND DRYING



Spraygun set-up:

1.2 - 1.3 mm fluid tip

Set pressure according to manufacturers recommendations

Number of coats:

Apply as light even double coats until opacity is obtained. Heavy application must be avoided, or aeration/popping may result.



Flash off:

Use air movement plus heat to accelerate drying, - for example Envirobase Express system.

Control coat

For flake colours, apply a light control coat onto dry film for even flake appearance.
For optimum flake laydown, apply control coat at 1.2 - 1.5 bar inlet pressure.



Before clearcoat:

Basecoats should be uniformly matt and dry before clearcoat application

REPAIR AND RECOATING

Overcoating:

Envirobase High Performance must be overcoated with a GRS Deltron clearcoat after the minimum flash times.

Recoat time:

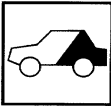
After 24 hours, 1 coat of Envirobase has to be applied prior to the clearcoat application.



De-nib:

The maximum recoat time is 48 hours.

It is possible to de-nib Envirobase, after 20 minutes flash off, with fine sanding paper – P1500 (dry paper) using air blowing and a tack rag to remove sanding dust and followed by a spot repair (see FADING-OUT section) prior to the clearcoat application.



Overcoat with:

A wide range of Deltron Clearcoats.
(See Clearcoat Technical Data Sheets for information)

FADE-OUT TECHNIQUE

Fading-out Envirobase is necessary for spot repair and advised when metallic or mica colours have to be repaired.

Apply basecoat to the prepared area to obliterate the primed area.

Reduce the pressure at the spraygun and fade into the surrounding area.

Flash off until uniformly matt, for larger areas apply final control coat (metallics and micas) before applying clear.

Alternatively use T490 as follows :

Prepare Envirobase colour as specified in the datasheet.

Using light inward strokes reach coverage on the repaired area.

Thin one part of the ready for use Envirobase with one part of T490 ready to use

Use this mixture to fade the repair edges spraying from the outside to the inside the repair area.

Repeat the last step until the potential colour difference has been lost.

Allow the repair become uniformly matt and dry before clearcoating.

EQUIPMENT CLEANING

Clean all mixing equipment immediately after use, preferably using a dedicated waterborne equipment cleaning machine.

Use tap water, with a final rinse using deionised water or an alcohol-based cleaner such as D846.

Ensure all equipment is completely dry before storage or use.



ENVIROBASE HIGH PERFORMANCE ADDITIVE – T492

High Performance Additive – T492 has been developed as alternative to the standard Envirobase High Performance Thinners to provide additional to protection in high risk areas of the vehicle e.g. on low profile front ends prone to stone chips, or in extreme conditions like driving at high speed on gravel roads, or when subjected to high pressure washing.

MIXING RATIOS

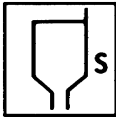
Mixing Ratios with Envirobase High Performance Colour

| | <u>By Volume</u> |
|-------------------------------------|------------------|
| Envirobase Solid Colours | 100 Vols |
| High Performance Additive T492 | 10 Vols |
| Envirobase Metallic or Mica Colours | 100 Vols |
| High Performance Additive T492 | 10 Vols |
| Thinner T494/T495 | 10 Vols |

Thinner selection Below 35°C T494 Above 35°C T495

At high temperatures, (above 30°C), 20% of thinner (i.e. an additional 10%) may be used to help application, laydown and overspray absorption.

Note: If the 10% addition of T492 only is used, then it is very important to strictly observe the flash off times between coats and before the application of clearcoat.



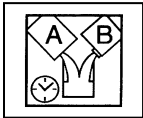
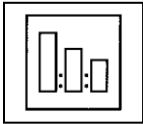
Viscosity will vary with the thinner level chosen, but the ideal application viscosity is 22 - 26 seconds / DIN4 / 20°C

Potlife: 3 months. Stir well before use

Note: Application, flash off and drying are the same as with the Envirobase High Performance standard process.



Envirobase Waterborne Basecoat Topcoat Envirobase Express Process



Mixing by volume

Solid Colours - With Thinner T494/495 100 Vols : 10 Vols
Metallic and Mica Colours - with T494/495 100 Vols : 20 Vols*
* 30 vols may be used when the application temperature is above 30°C

Thinner selection Below 35°C T494 Above 35°C T495

Pot Life at 20°C 3 months. Stir well before use.

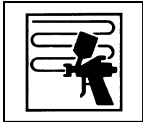
Ideal Application viscosity

Viscosity will vary with the thinner level chosen,
but the ideal application viscosity is 22 - 26
seconds / DIN4 / 20°C

Spraygun Size

1.2 - 1.3 mm fluid tip

Number of Coats



Standard Process Apply single light coats until opacity is obtained.
Flash off thoroughly between coats
A control coat is recommended for flake colours

Express Process Apply as light even double coats until opacity is
obtained.
A control coat is recommended for flake colours

Drying Times

Standard Process / Express Process :

Use an air blower until surface is touch dry.

Minimum - Basecoat to be dry and matt before the application of
Clearcoat

Maximum - 48 hours at 20°C before application of Clearcoat, but
after 24 hours, 1 coat of Envirobase has to be applied prior to clearcoating
20 minutes at 20°C before taping

Overcoating

Envirobase Basecoat colours can be overcoated with a wide range of
PPG Clearcoats. See Clearcoat Data Sheet for details.



PERFORMANCE & LIMITATIONS



DO NOT use the spraygun as an airblower

STORAGE & HANDLING



Envirobase High Performance tinters, mixed colour & T494 thinner should be stored in a cool, dry place away from sources of heat. During storage and transportation temperatures must be maintained at a minimum of +5°C and a maximum of +35°C. Avoid exposure to frost or freezing conditions.



Envirobase should be mixed in clean, dry containers and equipment. Do not use mixing vessels or spray equipment that contains solvent residues. Mixing vessels should ideally be plastic - if metallic they should have an internal anti-corrosion coating.

VOC INFORMATION

The EU limit value for this product (product category: IIB.d) in ready to use form is max. 420g/litre of VOC. The VOC content of this product in ready to use form is max. 420g/litre. Depending on the chosen mode of use, the actual ready to use VOC of this product may be lower than that specified by the EU Directive code.

WASTE HANDLING & DISPOSAL / HEALTH & SAFETY



These products are for professional use only, and are not to be used for purposes other than those specified. The information on this TDS is based on present scientific and technical knowledge, and it is the responsibility of the user to take all necessary steps in order to ensure the suitability of the product for the intended purpose. For Health and Safety information please refer to the material Safety Data Sheet, also available at: http://www.ppg.com/PPG_MSDS

Store waterborne & solventborne wastes separately. All wastes must be handled by a competent agent with appropriate certification. Waste **must** not be disposed of into drains or watercourses.

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