



AUTO REFINISH



Product Information

LIQUID CRYSTAL™ CRYSTAL PEARL™

Liquid Crystal
VM4101 VM4102 VM4103
VM4104
Crystal Pearl
PRLX1 PRLX2 PRLX3 PRLX4
PRLX5 PRLX6 PRLX7 PRLX8
PRLX9

PRODUCTS

Liquid Crystal Base Coat Colour	VM41XX
Crystal Pearl Base Coat Colour	PRLX-X
Deltron Thinners	D870, D807, D872, D873
Deltron MS Hardener	D841

PRODUCT DESCRIPTION

Crystal Pearl and Liquid Crystal are unique selections of clear and colour shifting particles that greatly enhance basecoat colour with a crisp and vivid sparkle effect.

Alternatively users have the flexibility to intermix these unique pigments with existing colour or use them as a multi-layer system to create "one of a kind" colours.

These colours are totally compatible with the PPG Global Refinish System range of products, and can be used in the same manner as the Global Basecoats.

PREPARATION OF SUBSTRATE



SUBSTRATE

PPG 2K primers
Electrocoat
Sound 2K finishes
TPA

PREPARATION

P500 - dry / P800 - wet
Pre-prime - Do not topcoat direct
P500 - dry / P800 - wet
P500 - dry / P800 - wet - Must be sealed
(e.g. D834)

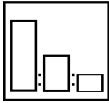


Before and after any sanding operation, the substrate must be thoroughly degreased using D845 or D837.

Application Guide

Basecoat

Mixing Ratio



Standard BC	BC	1 vol
	Thinner	1 vol
Activated BC	BC	8 parts by volume
	D841	1 part by volume
	Thinner	7 parts by volume
Custom Liquid Crystal mixing	D895/BC	100 grams/parts
	Liquid Crystal	up to 5 grams/parts
Custom Crystal Pearl mixing	D895/BC	100 grams/parts
	Crystal Pearl	up to 12 grams/parts

NOTE: GRS BC (Basecoat) activation will be necessary for multi-layer applications (both the groundcoat and midcoat), high film builds (i.e. more than four coats), commercial vehicles, motorbikes, or wheel painting where a higher impact resistance is necessary. This applies to PPG Custom finishes within the Vibrance collection, such as Liquid Crystal, Crystal Pearls, Harlequin, Radiance II candy, Prizmatique and 3-layer finishes.

**** RFU mix ratios available on paint manager only**

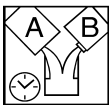
Choose Thinner according to application temperature and repair area size

(see product manual section 3 general information)

	Thinner
Up to 18°C	D870
18°C – 25°C	D807
Over 25°C	D872

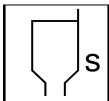
For exceptional conditions of temperature and humidity (>35°C or >70%) Extra Slow Thinner D873 may be used in BC.

Potlife



Uncatalysed (no hardener)	No limit
Catalysed (with hardener)	6 hours

Spray Viscosity



15 secs DIN4
at 20°C

Spraygun Setup



1.3–1.4 mm

Spray Pressure - HVLP /RP	1.3 -1.8 bar / 20 - 25 PSI
- Conventional	1.8 - 2.5 bar / 25 - 35 PSI

Number of Coats



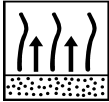
BC groundcoat or
Liquid Crystal / Crystal
Pearl colour

2 - 3 medium wet coats or until hiding is achieved.
(+ 1 light control coat if required)

Liquid Crystal / Crystal
Pearl midcoat

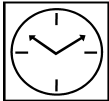
2-4 or until colour is achieved. The correct technique must be used to minimise overlaps and achieve a uniform effect.

Flash Off at 20 °C



Between coats 10 minutes
Before clearcoat 15 minutes

Drying Times



Tape time standard BC 15 minutes
Tape time Activated BC 30 minutes

Technical Data

Total Dry Film Build

Minimum 10 µm
Maximum 25 µm

Theoretical Coverage* 3.5 – 7 m²/L ready-to-spray

* Assuming 100% transfer efficiency and dry film thickness as indicated

Flash Points

BC Colour, Refer PPG MSDS
D870, D807, D872, D873, D845, Refer PPG MSDS
D837, D846, D841

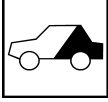
Sanding



Grade damp

To remove minor defects in Liquid Crystal or Crystal Pearl BC, de-nib after 20 minutes flash-off using fine sand paper (P800 - P1200 or P1000 Abralon damp) followed by more base coat prior to the clearcoat application. Use damp fine sandpaper only and avoid using excessive water when de-nibbing.

**** Do not wet sand large areas of Liquid Crystal or Crystal Pearl basecoat. Wet sanding can lead to excessive water absorption by the basecoat and can downgrade the mechanical properties of the system particularly in the subsequent topcoats.**

Overcoat/Recoat Time Activated / Unactivated

After 24 hours

15 minutes minimum prior to clearcoat application

12 hours maximum prior to clearcoat application

After 12 hours Liquid Crystal or Crystal Pearl BC has to be re-applied prior to clearcoat application

Overcoat with

Any PPG Global clear

Liquid Crystal and Crystal Pearl Basecoat Blend – out Technique

Blending out Liquid Crystal and Crystal Pearl BC is advisable when Liquid Crystal and Crystal Pearl colours have to be repaired. When added into a conventional Basecoat colour use the techniques outlined below.

Multi-layer system repairs require advanced blending techniques. If necessary contact your local PPG Training Centre for more information.

Preparing the blend area

Ensure the whole area to be painted has been thoroughly cleaned using D845 or D837 Spirit Wipe. Thoroughly flatten the area using Abralon P1000-2000. Use the Abralon damp applying water with a water sprayer bottle on to the Abralon pad or paint surface, then flat the area to be painted by hand or 3mm orbital sander. The blend area should have a uniform matt appearance.

Clean panel thoroughly using D837 Spirit Wipe prior to applying paint.

Tip 1: Some OEM clears can be soft and, using various scouring pads can cause a gouging type effect. This will appear as sand scratching, particularly in the back of the blended area. To resolve this, apply 1 uniform medium wet coat of D895 Colour Blender to the area that is to have colour and clear applied to it. This will make the blending process easier and also stop any deep scratches appearing at the back of the blended area, especially in silver and gold metallic.

Tip 2: PPG recommend sealing the whole panel by applying the first coat of clear 50mm from the adjoining panel followed by a second coat of clear over the entire panel. This process will assist in reducing the darkening of panels.

Use D851 BC Fade-out Thinner as follows:

- Prepare Liquid Crystal or Crystal Pearl BC colour as specified in this data sheet
- Using light inward strokes, achieve coverage on the repaired area
- Thin 1 part of the ready-for-use Liquid Crystal or Crystal Pearl BC with 1 part D851 Deltron Fade-out Thinner
- Use this mixture to fade the repair edges spraying from the outside to the inside of the repair area in a fanning motion
- Repeat the last step until the potential colour difference has been lost
- Allow 15 minutes flash-off before clearcoating
- Clearcoat the entire panel in a PPG clearcoat

NOTES

1. Custom or exotic finishes are excluded from coverage under the Global Paint Performance Guarantee.
2. **Standard Mixing** - Settling may occur in shipping. Hand stir thoroughly before the addition of thinners.

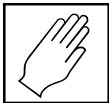
EQUIPMENT CLEANING

After use, clean all equipment thoroughly with cleaning solvent or thinner.

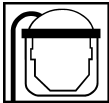


Health and Safety

Please refer to Material Safety Data Sheets for full Health and Safety details.



- Global Hardeners and activated Global BC and PPG 2K Clearcoats contain isocyanate and therefore particular safety precautions must be taken.
- Goggles must be worn when mixing and using to prevent accidental splashing into the eye. If contact occurs with eyes give prolonged irrigation with water and get medical attention immediately.



- Good ventilation and extraction must be provided in the working environment.
- Wear suitable protective equipment to prevent skin contact with this material.
- When spraying this product the operator (and persons in vicinity) must wear suitable air-fed breathing apparatus.

Do not smoke whilst using this material.

This product is for professional use only.

The information given in this sheet is for guidance only. Any person using the product without first making further inquiries as to the suitability of the product for the intended purpose does so at his own risk and we can accept no liability for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of such use. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development.

Drying times quoted are average times at 20°C/68°F. Film thickness, humidity and shop temperature can all affect drying times.



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