

Matte and Semi-Gloss Clearcoat System

EU-150



GLOBAL REFINISH
SYSTEM™

D8115 / D8117

Product Description:

The GLOBAL REFINISH SYSTEM™ Matte Clearcoat System consists of two versatile 2K acrylic urethane clearcoats designed to reproduce a range of low gloss levels, including the specialized repairs of vehicles or areas of vehicles originally finished with a low gloss clearcoat over a single or multistage basecoat colour system (e.g. Lamborghini or Mercedes Benz full body matte finish). To allow for the normal gloss variations due to colour, model, position or repair on vehicle etc., the actual mix of the two clearcoats can be varied to match the vehicle to be repaired.

The D8115/D8117 or mixes of the two may also be used over rigid plastics without the need of special additives.

Global Refinish System D8115 Matte and D8117 Semi-Gloss Clearcoats are designed for use over *Global Refinish System* BC (see data sheet EU02), ENVIROBASE® High Performance basecoat colour (see data sheet EB143) and DELTRON® DBC solvent basecoats (see data sheet P-175).

Preparation of Substrate:



- When masking a repair, care should be taken to minimize direct contact of masking tape onto the original matte finish. Where it is necessary to use masking tape directly on the original finish, the tape must be removed before baking to avoid marking of the original which may not recover.
- D8115/D8117 clearcoats must be applied on top of a clean and dust-free basecoat. The use of a tack cloth is recommended after the basecoat has flashed off.
- Care should be taken to avoid dirt inclusion at all stages. Rectification of dirt inclusion in matte or low gloss finishes is not possible after the final coat of clearcoat.
- In all cases, wash surfaces to be painted with soap and water and then apply the appropriate PPG substrate cleaner. Ensure that the substrate is thoroughly cleaned and dried, both before and after application work.
- Wet sand with European P800-P1200 / US 500-600 grade paper or dry sand with European P600-P800 / US 400-500 grade paper.
- Wash off sanding residue and dry thoroughly before re-cleaning with the appropriate PPG substrate cleaner. The use of a tack rag is recommended.

Required Products

Hardener

D8239 Slow High Solids Hardener

Thinner

D871 Medium Thinner 65-77°F (18-25°C)

D872 Slow Thinner 77-95°F (25-35°C)

DT885 Warm Temperature Thinner

DT895 Hot Temperature Thinner

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Mix Ratios:



D8115/D8117 Clear: 3 vols.
D8239 Hardener: 1 vol.
D871/D872/DT885/DT895 Thinners: 1½ vols.

Note: The volume ratio shown above is for reference however it is important that to insure accurate and replicatable mixing of matte clearcoat finishes they should be mixed by weight on a scale. **To verify a colour match and gloss level, it is recommended that a test panel be sprayed before spraying the vehicle.** FC01-FC05 matte levels will appear with the colour formulas that require a low gloss finish. All mix by weight volumes for these formulas may be found in PAINTMANAGER®.

Pot Life:



1-2 hours at 68°F (20°C) (depending on thinner)

Blending Ratio:

D8115 or D8117 clearcoats may be used individually or combined to achieve five different levels of gloss. See table below for % combinations.

	FC01 = Flat	FC02 = Matte	FC03 = Eggshell	FC04 = Satin	FC05 = Semi-Gloss
	Lamborghini full body matte finish		Mercedes Benz, Smart, BMW, Fiat full body matte finishes		Older Mercedes lower body cladding
Percentage of Gloss	0-10.0%	10.1-20.0%	20.1-30.0%	30.1-45.0%	45.1-60.0%
D8115 %	100	85	70	40	0
D8117 %	0	15	30	60	100

Additives:



None

Note: Matte finish clearcoats may be applied over rigid plastics without the need to add a flexibilizer.

Spraygun Setup:



Fluid Tip: 1.2-1.4 mm or equivalent
Spray Viscosity: 15 seconds DIN4 68°F (20°C)

Spray Pressure:

HVLP: 10 psi at the air cap
Compliant: 29-40 psi at the gun

Note: For best overall results, refer to spraygun manufacturer's recommendations for inlet air pressures.

Application Process:



The preparation of colour test panels to check the colour and number of coats of clearcoat to achieve the correct matte effect is strongly recommended. The original matte finish can sometimes become less matte over time due to weathering and cleaning processes used by car owners. D8115/D8117 can be used individually or combined to achieve five levels of gloss.

Notes: No Fade-out process is possible for matte colours.

*The clearcoat can be de-nibbed to remove minor dirt inclusions after the flash off time between coats listed below. Any de-nibbing must be completed before the final coat of reduced gloss clearcoat is applied. **Dirt removal from the final low gloss finish is not possible.***

Apply: 1 full single coat
Flash off until evenly matte all over and
1 Full single coat followed immediately by a lighter (½ coat) cross coat.
Flash off until evenly matte before baking.

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Drying Times:



Between Coats:
68°F (20°C)

15-30 minutes for best results, allow to dry matte*

- Allowing the clearcoat to flash off completely between coats and before baking is important to achieve an even appearance and gloss level over the whole area. The actual flash off times will depend on the hardener/thinner and temperature combination required to achieve the correct gloss effect and could be between 15 and 45 minutes.



Dust Free:
68°F (20°C)

45 minutes

Dry to Handle:
68°F (20°C)

12-16 hours

Tape Time:
68°F (20°C)

12-16 hours

Air Dry:
68°F (20°C)

24 hours for full cure



Force Dry*:
140°F (60°C)

15-30 minutes purge time ensuring the clearcoat is completely matte before baking
40 minutes* bake



IR:
Medium Wave:
Short Wave:

15-20 minutes
8-15 minutes

**Force dry times are quoted for metal temperature. Additional time should be allowed in the force drying schedule to allow metal to reach recommended temperature.*

Overcoat/Recoat:



Overcoat/Recoat Time:

12 hours at 68°F (20°C) or after force dry/cool down



Grade Wet:
Grade Dry:

Must be sanded before recoating to ensure proper adhesion
European P800-P1200 / US 500-600
European P600-P800 / US400-500



Overcoat with:

Envirobase High Performance basecoat, Global Refinish System BC basecoat or Deltron DBC basecoat.

Recoat times will be extended at lower temperatures

Performance Guidelines:

The gloss levels achieved with this clear may vary depending upon film thickness and application. Low film thickness and dry application will give a lower gloss level. High film thickness and wetter application will give a higher gloss level. It is recommended that D8115/D8117 clearcoats be used only for complete panel repairs.

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General Care and Maintenance of Matte Finishes:

The following guidance on Care and Cleaning of matte finish vehicles is aimed at the car owner, and applies to both the OE and the repair finish. Particular care must be taken with matte finishes to maintain an original even matte effect.

See below for guidance for the car owner on maintaining the even matte effect over time:

Matte/Low gloss finishes can be relatively easily marked with general handling and day to day use (door/hood/deck lid opening, shoe scuffing on entry or exit of vehicle etc.). Care should be taken with these operations because marking or changing of the matte effect could result.

Care should be taken to avoid spillage of fuel onto the matte/low gloss finishes Fuel spills should be removed as soon as possible using the washing guidelines below to avoid permanent damage or altering of the low gloss effect.

1. In order to keep the matte surface effect, the use of paint cleaner, abrasives or polishes and wax polishes **must** be avoided. The vehicle **must** not be polished.
2. Polishing will lead to a higher, uneven gloss effect.
3. Cleaning with unsuitable materials could alter the matte effect (generally increasing gloss).
4. Automated car washing should be avoided. The preferred car washing method is by hand with a soft sponge, mild soap and lots of water. Frequent car washing over a period of time could lead to increased and inconsistent gloss levels across a car panel. Washing under directly sunlight should also be avoided.
5. Insects and bird droppings should be removed immediately. These residues should be soaked in water to soften and/or removed carefully with high pressure cleaning equipment. In the case of strongly adhered residues, a spray on insect remover should be used prior to washing.
6. Whenever using any type of cleaning fluids with soft sponges or cloths, it is essential not to apply pressure or rub the matte finish. A gentle wipe/spray on, wipe off technique should be used. Applying pressure will alter the matte effect and result in an uneven appearance.

Technical Data:**Total dry film build:**

Minimum:	2.0 mils
Maximum:	2.5 mils
Recommended film build per wet coat:	2.1-3.1 mils
Recommended dried film build per coat:	1.0-1.25 mils

Equipment Cleaning:

Spray guns, gun cups, storage pots, etc. should be cleaned thoroughly after each use with any PPG general purpose solvent, lacquer thinner or D87x Thinner.

Technical Data

RTS Combinations	D8115 : D8239 : D871/D872/ DT885/DT895	D8117 : D8239 : D871/D872/ DT885/DT895	D8115/D8117 : D8239 : D871/ D872/DT885/ DT895
Volume Ratio	3 : 1 : 1½	3 : 1 : 1½	3 : 1 : 1½
Applicable Use Category	Specialty Coating	Specialty Coating	Specialty Coating
VOC Regulatory (less water less exempts) g/L	574-578	574-578	574-578
VOC Regulatory (less water less exempts) lbs./ US gal	4.79-4.82	4.79-4.82	4.79-4.82
Solids vol. %	34.1	34.0	34.0-34.1
Sq. Ft. Coverage / US gal. 1 mil at 100% transfer efficiency	547	546	546-547

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Health and Safety:



- The contents of this package may have to be blended with other components before the product can be used. Before opening the packages, be sure you understand the warning messages on the labels and SDS's of all the components, since the mixture will have the hazards of all of its parts.
- Improper handling and use, for example, poor spray technique, inadequate engineering controls and/or lack of proper Personal Protective Equipment (PPE), may result in hazardous conditions or injury.
- Follow spray equipment manufacturer's instructions to prevent personal injury or fire.
- Provide adequate ventilation for health and fire hazard control.
- Follow company policy, product SDS and respirator manufacturer's recommendations for selection and proper use of respiratory protection. Be sure employees are adequately trained on the safe use of respirators per company and regulatory requirements.
- Wear appropriate PPE such as eye and skin protection. In the event of injury, see first aid procedures on SDS.
- Always observe all applicable precautions and follow good safety and hygiene practices.

See Safety Data Sheet and Labels for additional safety information and handling instructions.

Important: The contents of this package must be blended with other components before the product can be used. Before opening the packages, be sure you understand the warning messages on the labels of all components since the mixture will have the hazards of all its parts. Improper spray technique may result in a hazardous condition. Follow spray equipment manufacturer's instructions to prevent personal injury or fire. Follow directions for respirator use. Wear eye and skin protection. Observe all applicable precautions.

EMERGENCY MEDICAL OR SPILL CONTROL INFORMATION (412) 434-4515; IN CANADA (514) 645-1320

Materials described are designed for application by professional, trained personnel using proper equipment and are not intended for sale to the public. Products mentioned may be hazardous and should only be used according to direction, while observing precautions and warning statements listed on label. Statements and methods described are based upon the best information and practices known to PPG Industries. Procedures for applications mentioned are suggestions only and are not to be construed as representations or warranties as to performance, results, or fitness for any intended use, nor does PPG Industries warrant freedom from patent infringement in the use of any formula or process set forth herein.

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Matte & Semi-Gloss Clearcoat System

Mix:	<u>D811x</u>	<u>D8239 Hardener</u>	<u>D Series Thinner</u>
	3	1	1½
	Hardener	Thinner	
	D8239 Slow High Solids Hardener	D871 Medium Thinner 65-77°F (18-25°C)	
		D872 Slow Thinner 77-95°F (25-35°C)	
		DT885 Warm Temperature Thinner	
		DT895 Hot Temperature Thinner	
Additives:	None		
Pot Life:		1-2 hours at 68°F (20°C) depending on thinner used	
Air Pressure:		HVLP: 10 psi at the air cap Compliant: 29-40 psi at the gun Fluid Tip: 1.2-1.4 mm or equivalent Viscosity: 15 seconds DIN4 at 68°F (20°C)	
Application:		Apply: 1 full single coat, flash to matte and 1 single coat followed by a lighter (½ coat) cross coat	
		Between Coats: 15-30 minutes at 68°F (20°C)	
Dry Times:		Dust Free: 45 minutes at 68°F (20°C) Dry to Handle: 12-16 hours at 68°F (20°C) Tape Time: 12-16 hours at 68°F (20°C)	
		Force Dry:** 15-30 minutes purge 40 minutes bake at 140°F (60°C)	
		IR: Medium Wave: 15-20 minutes Short Wave: 8-15 minutes	
		<i>Must be sanded before recoating to ensure proper adhesion</i>	
		Dry to Overcoat/Recoat: After force dry/cool down or 12 hours at 68°F (20°C)	
		Grade Wet: European P800-P1200 / US 500-600 Grade Dry: European P600-P800 / US 400-500	

***Bake times quoted are for metal temperature. Additional time should be allowed in the force drying schedule to allow metal to reach recommended temperature.*