



GLOBAL REFINISH
SYSTEM



October 2010

Product Information



GRS Deltron Premium UHS Clearcoat D8141

D8141 Premium UHS Clearcoat

PRODUCTS

Deltron Premium UHS Clearcoat	D8141
Deltron UHS Hardeners	D8216, D8217, D8218, D8219
Deltron Thinners	D8718, D8719
Deltron Accelerated Thinner	D8714

For matt, satin and textured finishes or painting of flexible substrates:

Deltron Matting Base	D8456 to create a matt or satin appearance
Deltron Plasticiser	D814 to plasticise finishes over a flexible substrate
Deltron Matt Flexibiliser	D819 to create a matt or satin appearance over a flexible substrate
Deltron Texture Additive	D843 to create a fine textured 'suede' effect
Deltron Leather Grain Additive	D844 to create a coarser, more pronounced textured finish

PRODUCT DESCRIPTION

Deltron Premium UHS Clearcoat is a 2K acrylic urethane clearcoat for the repair and repainting of panels originally finished with clearcoat over a single or multistage colour basecoat system.

D8141 is designed for use over Envirobase basecoat colour. It may be used in 2 different modes, standard 2 coat application, or a "One Visit" application, where 1 medium / continuous coat is followed by a full coat with no flash off between coats.

Deltron Premium UHS Clearcoat has an organic solvent content lower than conventional clearcoats. This makes it particularly suitable when operating in areas where VOC emissions or product VOC content is restricted and productivity is an issue.

PREPARATION OF SUBSTRATE

Deltron D8141 Clear must be applied on top of clean and dust-free Envirobase basecoat. The use of a tack rag is recommended.

MIXING RATIO

Mixing ratios with HS Hardener:

	<u>By Volume</u>	<u>By Weight</u>
D8141	3 vol	See page 5
HS Hardener*	1 vol	
Thinner*	0.6 vol	

- Choose HS Hardener and Thinner according to application temperature *
- As with all ultra high solids products, cold ready for use paint temperatures can lead to more difficult application and overspray absorption. It is strongly recommended that ready for use product is applied at a temperature greater than 15°C

HARDENER AND THINNER SELECTION

<u>System</u>	<u>UHS Hardener</u>	<u>Thinner</u>	<u>Bake Schedule</u>
Accelerated	D8216	D8714	20 mins at 50°C / 10 mins at 60°C
Accelerated	D8217	D8714	40 mins at 50°C / 20 mins at 60°C
Express	D8216	D8718 / D8719	30 mins at 50°C / 15 mins at 60°C
Fast	D8217	D8718 / D8719	50 mins at 50°C / 25 mins at 60°C
Standard	D8218	D8718 / D8719	70 mins at 50°C / 35 mins at 60°C
Slow - For high Temperatures	D8219	D8718 / D8719	80 mins at 50°C / 40 mins at 60°C

The choice of thinner should be made according to application temperature, air movement and size of job.

MIXED PRODUCT DETAILS

Potlife at 20°C:	20 minutes	with D8216/7 and D8714 Accelerated Thinner
	30 - 45 minutes	with D8216 hardener
	1 hour	with D8217 hardener
	2 - 2.5 hours	with D8218/9 hardeners

Spray viscosity at 20°C 18 - 20 seconds DIN4.



APPLICATION AND FLASHOFF



Spraygun set-up: 1.3 - 1.6 mm

Conventional Two Coat Process

Application Apply 2 single coats to give ~60 microns dry film build.

Flash off between spray coats 5 – 7 minutes

Flash off before bake or IR dry 0 – 5 minutes

Express Single Visit Process

Application Apply 1 medium & 1 full coat to give 50-60 microns dry film build.

The first coat should be applied to all repair panels before the second coat is applied.

Flash off between spray coats For less than 3 panels, 2-3 minutes flash off.

For more than 3 panels, no flash off is required.

Flash off before bake or IR dry 0 – 5 minutes

DRYING TIMES

- Dust free time at 20°C
 - 15 - 20 minutes with D8216/7 + D8714
 - 20 - 30 minutes with D8217
 - 40 - 50 minutes with D8218
 - 60 minutes with D8219.
- Dry to handle at 20°C
 - 1.5 - 2 hours with D8216/7 + D8714
 - 4 hours with D8217
 - 6 hours with D8218
 - 8 hours with D8219.
- Through dry at 20°C
 - 6 - 8 hours with D8216/7 + D8714
 - 12 hours with D8217
 - 16 hours with D8218
 - 24 hours with D8219.
- Through dry at 50°C*
 - 20 - 40 minutes with D8216/7 + D8714
 - 50 minutes with D8217
 - 70 minutes with D8218
 - 80 minutes with D8219.
- Through dry at 60°C*
 - 10 - 20 minutes with D8216/7 + D8714
 - 25 minutes with D8217
 - 35 minutes with D8218
 - 40 minutes with D8219.
- Through dry at IR
(medium wave) 8 - 15 minutes (depending upon colour)



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

Total dry film build: 50 – 60 µm

Theoretical coverage: Assuming 100% transfer efficiency and dry film thickness as indicated: 8 m²/l



REPAIR AND RECOATING



Sanding:

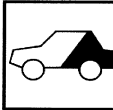
- *grade wet*
- *grade dry*

Essential before recoating to ensure good adhesion

P800

P400 - P500

Overcoat / Re-coat time:



- *Force dry at 60°C,
70°C or IR*

After cooling

- *Air drying at 20°C*

12 - 24 hours - depending on hardener.

Overcoat with:

Deltron primers
Envirobase
Deltron topcoats

POLISHING



If polishing is required, i.e. to remove dirt nibs, it is recommended that it is carried out between 1 hour and 24 hours after the quoted drying time.
Use PPG Specialty Polishing system SPP1001.

FADE - OUT REPAIR PROCEDURE

- Apply D8141 Premium UHS Clearcoat according to the information above
- Take care to minimise the clearcoat edge in the fade-out area
- Melt overspray edge using D8730 Aerosol Fade-Out Thinner or D8429 Rapid Blender.
- Refer to datasheet No: RLD 199V for successful repair.



MATT, SATIN AND TEXTURED FINISHES PAINTING OF FLEXIBLE SUBSTRATES

To obtain a matt, semi-matt (satin) or textured finish with Deltron D8141 Premium UHS Clearcoat, it is necessary to include matt, flex or texture additives in the mix. Additives are also required when applying D8141 over a flexible substrate .
The additives required and the appropriate volume and/or weight mix ratios are indicated in microfiches if relevant or in the tables below.

Note: The majority of plastics used on cars are considered **Rigid**. These plastics may lose flexibility when painted off the car, but are rigid once mounted. UHS Clearcoats only require addition of the Flexible Additive (See **Flexible** chart below) when painting very flexible plastics mostly found on older vehicles, e.g. foam type.

Cumulative Mixing by Weight

Do not tare the balance between additions

Using D8718 Or D8719 Thinners

Substrate	Appearance	D8141	D8456	D843	D844	D814	D819	UHS Hardener	D8718 or D8719
RIGID	Gloss	639g	-	-	-	-	-	870g	977g
	Satin	481g	724g	-	-	-	-	899g	980g
	Matt	386g	776g	-	-	-	-	916g	981g
	Matt Textured	287g	-	641g	-	-	-	745g	946g
	Leather Grain	392g	-	-	708g	-	-	850g	960g
FLEXIBLE	Gloss	532g	-	-	-	633g	-	865g	972g
	Satin	250g	481g	-	-	-	614g	818g	975g
	Matt	210g	562g	-	-	-	674g	864g	982g
	Matt Textured	210g	-	522g	-	-	633g	823g	970g
	Leather Grain	280g	-	-	506g	-	654g	908g	987g

Using D8714 Accelerated Thinner

Substrate	Appearance	D8141	D8456	D843	D844	D814	D819	UHS Hardener	D8714
RIGID	Gloss	653g	-	-	-	-	-	890g	987g
	Satin	481g	724g	-	-	-	-	899g	985g
	Matt	386g	776g	-	-	-	-	916g	986g
	Matt Textured	284g	-	639g	-	-	-	743g	957g
	Leather Grain	392g	-	-	708g	-	-	850g	967g
FLEXIBLE	Gloss	532g	-	-	-	633g	-	865g	985g
	Satin	250g	481g	-	-	-	614g	818g	986g
	Matt	210g	562g	-	-	-	674g	864g	990g
	Matt Textured	210g	-	522g	-	-	633g	824g	980g
	Leather Grain	280g	-	-	506g	-	655g	909g	992g

These products are for professional use only.



WEIGHT MIX TABLE FOR D8141 USING D8718 OR D8719 THINNERS

GUIDELINES FOR WEIGHT MIXING

Where a specific volume of clearcoat mix is required, this may be best achieved by weight mixing, using the guidelines below.

The weights are cumulative - please do **NOT** tare the balance between additions.

Target Volume of RFU Paint required (Litres)		Weight Clearcoat D8141	Weight UHS Hardener D8216 / 7 / 8 / 9	Weight Thinner D8718 or D8719
0.10 L		64 g	87 g	98 g
0.20 L		128 g	174 g	195 g
0.25 L		160 g	218 g	244 g
0.33 L		211 g	287 g	322 g
0.50 L		320 g	435 g	489 g
0.75 L		479 g	653 g	733 g
1.00 L		639 g	870 g	977 g
1.50 L		959 g	1305 g	1466 g
2.00 L		1278 g	1740 g	1954 g
2.50 L		1598 g	2175 g	2443 g

WEIGHT MIX TABLE FOR D8141 USING D8714 ACCELERATED THINNER

GUIDELINES FOR WEIGHT MIXING

Where a specific volume of clearcoat mix is required, this may be best achieved by weight mixing, using the guidelines below.

The weights are cumulative - please do **NOT** tare the balance between additions.

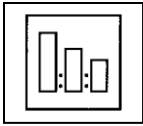
Target Volume of RFU Paint required (Litres)		Weight Clearcoat D8141	Weight UHS Hardener D8216 / 7 / 8 / 9	Weight Accelerated Thinner D8714
0.10 L		65 g	89 g	99 g
0.20 L		131 g	178 g	197 g
0.25 L		163 g	223 g	247 g
0.33 L		215 g	294 g	326 g
0.50 L		327 g	445 g	494 g
0.75 L		490 g	668 g	740 g
1.00 L		653 g	890 g	987 g
1.50 L		980 g	1335 g	1481 g
2.00 L		1306 g	1780 g	1974 g
2.50 L		1633 g	2225 g	2468 g



Global at a Glance

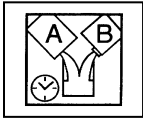
GRS Deltron Premium UHS Clearcoat

D8141



Mixing by volume

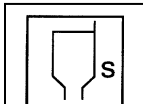
With UHS Hardener 3:1:0.6



<u>Pot Life at 20°C</u>	Using D8216/7 + D8714	20 minutes
	Using D8216	30 - 45 minutes
	Using D8217	60 minutes
	Using D8218/9	2 - 2.5 hours

Hardener / Thinner Selection

To bake 10 minutes at 60°C	D8216 UHS Hardener D8714 – Accelerated thinner
To bake 15 minutes at 60°C	D8216 UHS Hardener D8718 - Medium thinner
To bake 20 minutes at 60°C	D8217 UHS Hardener D8714 - Accelerated thinner
To bake 25 minutes at 60°C	D8217 UHS Hardener D8718 or D8719 - Thinner
To bake 35 minutes at 60°C	D8218 UHS Hardener D8719 - Thinner



Application Viscosity 18 - 20 seconds DIN4



Spraygun Size 1.3 - 1.4 mm fluid tip



Number of Coats

Conventional -
2 single coats, 5 - 7 minute flash-off between coats.

Express

1 light/medium coat, plus by 1 full coat. The first coat should be applied to all repair panels before the second coat is applied.
For less than 3 panels, allow 2-3 minutes flash off.
For more than 3 panels, no flash off is required.



Drying Times

<u>Dust free at 20°C</u>	15 - 20 mins with D8216/7 + D8714
	20 minutes with D8216, 20 - 30 minutes with D8217 40 - 50 minutes with D8218 60 minutes with D8219.
<u>Through dry at 60°C</u>	10 - 20 minutes with D8216/7 + D8714
	15 minutes with D8216
	25 minutes with D8217
	35 minutes with D8218
	40 minutes with D8219.



BEST PRACTICES WITH UHS PRODUCTS

Paint storage conditions

Keep ready for use paint in good conditions to ensure correct viscosity.

RFU temperature above a minimum of 15°C and ideally over 18°C.
This includes paint, hardeners and thinners.

Mixing and making ready for use

Activate accurately, and by weight where ever possible.

Where mixing must be by volume, only use a round and parallel sided mixing container together with the correct mixing stick. If using a measuring container marked in percentages, you must be sure that the percentages give the correct quantities.

Make sure that Hardener and Thinner is mixed in well. High solids or high viscosity products can take a little longer to mix in, so a good practice is to stir Hardener in first, then add thinner before stirring again.

Use mixed product as quickly as possible.

Choose the correct Hardener for the required bake cycle.

Keep to the recommended levels of additives.
Do not exceed the recommended level of additives such as Flexibilisers.

Application technique, process and equipment choices

Use correct spraygun set ups, and set up the spraygun correctly.

Use a "Single Visit" application wherever possible, following the advice given in the application section.

Check that the spraybooth is operating effectively. If necessary make an oven check to be sure that metal temperature is reached, especially on low down repair areas.

PPG recommendations are based on time at metal temperature, so this should be allowed for in the bake cycle that is set for the job.



EQUIPMENT CLEANING

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

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.

Note:

Combinations of this product with D759, D814, D819, D843 or D844 will produce a paint film with special properties as defined by the EU Directive code.

In these specific combinations: The EU limit value for this product (product category: IIB.e) in ready to use form is max. 840g/litre of VOC. The VOC content of this product in ready to use form is max. 840g/litre.

HEALTH AND 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: www.ppgrefinish.com

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