



VB-12

DITZLER® BIG FLAKE™

VM4401 <i>Big Flake</i> - Gold	VM4421 <i>Big Flake</i> - Mini Silver
VM4402 <i>Big Flake</i> - Silver	VM4422 <i>Big Flake</i> - Red
VM4403 <i>Big Flake</i> - Green to Purple	VM4423 <i>Big Flake</i> - Orange
VM4404 <i>Big Flake</i> - Blue to Red	VM4424 <i>Big Flake</i> - Blue
VM4405 <i>Big Flake</i> - Red to Gold	VM4425 <i>Big Flake</i> - Purple
VM4406 <i>Big Flake</i> - Gold to Silver	VM4426 <i>Big Flake</i> - Green
VM4420 <i>Big Flake</i> - Mini Gold	

DITZLER® BIG FLAKE™ bold metal flake colors are offered in 9 colors as well as 4 color-shifting versions to create a wide range of basecoat and tri-coat custom color formulations.

Ditzler Big Flake colors can be added directly to basecoats or used as a ground coat for RADIANCE® II candy color midcoats. *Big Flake* colors can also be added to color blenders, midcoats or *Radiance II* candy colors and used as a midcoat/pearlcoat effect.

For procedures relating to custom and/or restoration work refer to PPG's Custom Restoration Guide available at ppgrefinish.com under Training.



Compatible Products and Systems

Ditzler Big Flake colors can be used in conjunction with the systems shown below:

- DELTRON® DBC 2000 Refinish System - Follow P-175 *Deltron* DBC recommendation for proper preparation and compatible primers.
- GLOBAL REFINISH SYSTEM® BC Refinish System - Follow EU02 *Global Refinish System* BC recommendation for proper preparation and compatible primers.
- ENVIROBASE® High Performance Refinish System - Follow EB-143 *Envirobase* High Performance recommendations for proper preparation and compatible primers.
- AQUABASE® Plus Refinish System - Follow PDS N5.3.2 recommendations for proper preparation and compatible primers.
- DBC500 Color Blender - Follow P-176 *Deltron* DBC500 recommendations for proper preparation and compatible primers.
- D895 Color Blender - Follow EU113 *Global Refinish System* BC recommendations for proper preparation and compatible primers.
- VWM5556 VIBRANCE COLLECTION® Waterborne Midcoat - Follow VB-15 recommendations for proper preparation and use.
- VWM500 *Vibrance Collection* Custom Midcoat - Follow VB-22 recommendations for proper preparation and use.

Note: Custom or exotic finishes are excluded from coverage under the PPG Paint Performance Guarantee.

Directions for Use

Surface Preparation



- When working on custom finishes close attention to the details outlined for standard basecoat preparation, sanding, and cleaning is needed to achieve the optimum results.
- *Big Flake* glass flake colors are designed to be applied over properly cleaned, sanded, and primed surfaces.

VM44xx**Mixing Ratio:**

(adding VM44xx to a
basecoat color or
blender)



For a custom formulation you may add a maximum of 4% (by weight) *Ditzler Big Flake* pigments to unreduced color or 2% (by weight) to ready-to-spray DBC, BC, EHP, ABP, DBC500, D895, VWM5556, or VWM500. **A table for weights and amounts appears in this bulletin.**

Reducing:

(basecoat color or
blender already
containing VM44xx)

**Reduction of basecoat color or blender containing VM44xx**

For detailed *Deltron* DBC 2000 reduction specifics see data sheet P-175**

For detailed *Global Refinish System* BC reduction specifics see data sheet EU02**

For detailed *Envirobase* High Performance EHP reduction specifics see data sheet EB-143

For detailed *Aquabase* Plus ABP reduction specifics see data sheet PDS N5.3.2

For detailed DBC500 reduction specifics see data sheet P176**

For detailed D895 reduction specifics see data sheet EU113**

For detailed VWM5556 reduction specifics see data sheet VB-15

For detailed VWM500 reduction specifics see data sheet VB-22

DX57 or D888 activator **must be used in DBC or BC colors containing *Ditzler Big Flake* color.

When using *Ditzler Big Flake* tri-coat custom colors, DX57 or D888 activator **must** be used in both the ground coat and midcoat colors.

**Pot Life:**

See specific product data sheet listed above

Using activated material beyond 1 hour may result in wrinkling or other product failures (especially on multiple colors).

Additives:

See specific product data sheet listed above

Air Pressure**And Gun Setup:****HVLP:**

8 - 10 psi at the air cap

Compliant:

29 - 40 psi at the gun

Gun Setup:

1.2 - 1.5 mm or equivalent

1.6 - 1.8 mm or equivalent (for VM4401 Gold and VM4402 Silver)

Refer to spraygun manufacturer's recommendations for inlet air pressures.

Application:**Apply:**

Sufficient number of coats to achieve desired effect.

Spraying a test panel is recommended to determine desired effect.

Drying Times**Between Coats:**

See specific product data sheet listed above

**Air Dry:****Tape Time:**

See specific product data sheet listed above

**Dry to Clearcoat:**

See specific product data sheet listed above

24 hour maximum to clearcoat

Note: Basecoat colors are designed to dry low in gloss. This makes color match and its approval difficult to see until the clearcoat is applied. **A good technique is to spray the basecoat and clearcoat on a small test panel before spraying the job.**

If the basecoat color is allowed to dry more than 24 hours, it must be scuffed and new basecoat color applied.

VM44:xx

Tri-Coat Mixing:	<p>When applying <i>Deltron</i> basecoat or <i>Global Refinish System</i> basecoat, 5% DX57 or D888 Basecoat Activator must be added to the reduced basecoat prior to spraying in BOTH the ground coat and mid-coat.</p> <p><i>Big Flake</i> pigments can be blended as a mid-coat color with DBC500, VWM5556 Waterborne Midcoat, VWM500 Custom Midcoat or D895 Color Blender. In doing so you achieve more transparency, when combined with varying ground coat colors and create different degrees of custom effects.</p>
Striping or Two Toning	<p>Tape Times: Tape time of DBC and BC is 30 - 60 minutes at 70°F (21°C) and 50% relative humidity. Tape time of EHP, ABP and VWM5556 is 30 - 35 minutes at 70°F (21°C) and 50% relative humidity. Tape time of VWM500 is 45 - 60 minutes (additional coats may require longer dry time).</p> <p>All striping, two toning must be completed within 24 hours. If allowed to dry for more than 24 hours, it must be sanded and reapplied.</p> <p>When applying DBC or BC basecoats, 5% DX57 or D888 Basecoat Activator must be added to the reduced basecoat prior to spraying in BOTH the ground coat and mid coat.</p>
Clearcoating:	<p>Due to the large particle size of the <i>Ditzler Big Flake</i> pigment, you must apply 2.5-3.0 mils of clear (usually 2-4 coats) to cover the basecoat.</p> <p>Clear with any <i>Vibrance Collection</i> clearcoat or any clearcoat recommended for <i>Deltron</i> DBC, <i>Global Refinish System</i> BC, <i>Envirobase</i> High Performance or <i>Aquabase</i> Plus.</p>
Equipment Cleaning:	<p>Spray guns, gun cups, storage pots, etc., should be cleaned thoroughly after each use with any appropriate PPG general purpose solvent.</p>

Styling Tips

- A thicker and wetter film will help to level the VM4401 Gold and VM4402 Silver flakes. When flakes are sprayed on too dry, they stand up on end, appear more dirty and are harder to cover with clear.
- A fluid tip of 1.6-1.8 mm or equivalent will give the best results with VM4401 Gold and VM4402 Silver (See Spray-gun Setup section)
- When using as a midcoat, VM4401 Gold and VM4402 Silver flakes spray better in a medium solid clear than a basecoat blender.
- The following basecoat colors are recommended for use under the *Big Flake* metal colors to maximize effect. All *Big Flake* color may be applied over a number of different basecoat colors to achieve many different effects and appearances.

<i>Big Flake</i> Color		Basecoat Color
Gold VM4401	over	25622
Mini Gold VM4420		
Silver VM4402	over	33896
Mini Silver VM4421		
Green to Purple VM4403	over	9700
Blue to Red VM4404		
Red to Gold VM4405		
Gold to Silver VM4406		

- Adding any of the color shifting *Ditzler Big Flake* color products directly to a basecoat color may cause the final color to appear darker or dirtier.
- Applying any of the color shifting *Ditzler Big Flake* color products as a midcoat may cause the final color to appear darker or dirtier than without the flake containing midcoat.
- It is recommended that a complete spray out panel (including clearcoat) is created for each color combination to verify what the final appearance will be.

VM44xx

Mixing Amounts

For a custom formulation you may add a maximum of 4% (by weight) *Ditzler Big Flake* color to unreduced color or 2% (be weight) to ready to spray container of DBC, BC, EHP, ABP, DBC500, D895, VWM5556, or VWM500. All amounts show in the table below are by weight (grams or parts) and not volume (ounces).

Unreduced DBC, BC, DBC500, D895, VWM5556, VWM500, EHP, ABP or Grams or Parts (by weight)	VM44xx Grams or Parts (by weight)	Reduced DBC, BC DBC500, D895, VWM5556, EHP , ABP Grams or Parts (by weight)	VM44xx Grams or Parts (by weight)
100	4	100	2
150	6	150	3
200	8	200	4
250	10	250	5
300	12	300	6
350	14	350	7
400	16	400	8

Technical Data /	DBC	BC	EHP	APB
Package VOC Actual	5.20-6.16 lbs./gal (623-738 g/L)	5.38-6.08 lbs./gal (645-729 g/L)	0.39-1.00 lbs./gal (47-120 g/L)	0.39-1.00 lbs./gal (47-120 g/L)
Package VOC Regulatory (Less water, less exemptions)	5.20-6.16 lbs./gal (623-738 g/L)	5.38-6.08 lbs./gal (645-729 g/L)	1.73-3.30 lbs./gal (207-395 g/L)	1.73-3.30 lbs./gal (207-395 g/L)
RTS Volume Ratio	1:1 + 5%	1:1 + 5%	1:10-30%	1:10-30%
RTS VOC Regulatory (Less water, less exemptions)	5.70-6.20 lbs./gal (683-743 g/L)	5.74-6.20 lbs./gal (687-743 g/L)	1.78-3.50 lbs./gal (213-419 g/L)	1.78-3.50 lbs./gal (213-419 g/L)

	DBC500	D895	VWM5556	VWM500
Package VOC Actual	5.57-5.62 lbs./gal (667-673 g/L)	5.57-5.62 lbs./gal (667-673 g/L)	0.37-0.39 lbs./gal (44-46 g/L)	1.52-1.55 lbs./gal (182-189 g/L)
Package VOC Regulatory (Less water, less exemptions)	5.57-5.62 lbs./gal (667-673 g/L)	5.57-5.62 lbs./gal (667-673 g/L)	1.62-1.69 lbs./gal (194-203 g/L)	3.52-3.66 lbs./gal (422-439 g/L)
RTS Volume Ratio	1:1 + 5%	1:1 + 5%	4:1	1:1 + 5%
RTS VOC Regulatory (Less water, less exemptions)	6.09-6.49 lbs./gal (730-778 g/L)	6.06-6.26 lbs./gal (726-750 g/L)	2.13-2.30 lbs./gal (255-276 g/L)	5.70-5.88 lbs./gal (683-705 g/L)

For detailed DBC recommendations and VOC specifics see data sheet P-175
 For detailed BC recommendations and VOC specifics see data sheet EU02
 For detailed EHP recommendations and VOC specifics see data sheet EB-143
 For detailed ABP recommendation and VOC specifics see data sheet PDS N5.3.2

For detailed DBC500 recommendations and VOC specifics see data sheet P176
 For detailed D895 recommendations and VOC specifics see data sheet EU113
 For detailed VWM5556 recommendations and VOC specifics see data sheet VB-15
 For detailed VWM500 recommendations and VOC specifics see data sheet VB-22

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.

PPG Automotive Refinish
 19699 Progress Drive
 Strongsville, OH 44149
 800.647.6050

PPG Canada Inc.
 2301 Royal Windsor Drive, Unit #6
 Mississauga, Ontario L5J 1K5
 888.310.4762

Follow us online:
www.ppgrefinish.com



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