DuPont™ Cromax® Pro

Technical Data Sheet

Product **Pro**cess **Pro**ductivity

Description

1-component, polyurethane based, waterborne basecoat for use in clear over base systems for solid, metallic and pearl colors. Suitable for use on cars, trucks and buses. Composition based on polyurethane copolymer.

Products	Packages	Shelf life at 20°C
WB01™ – WB99™ Cromax® Pro Mixing Color (opaque)	0.5 – 1 Liter	4 years*
* WB91™ Transoxide Red	0.5 liter	2 years
WB1000™ – WB1025™ Cromax® Pro Pearl Mixing Color	0.5 Liter	3 years
WB1030™ – WB1099™ Cromax® Pro Aluminum Mixing Color	0.5 – 1 Liter	2 years
WB2010™ Binder I	3.5 Liter	2 years
WB2020™ Binder II	3.5 Liter	2 years
WB2030™ Viscosity Balancer	3.5 Liter	2 years
WB2040™ Controller – Standard	3.5 Liter	2 years
WB2043™ Controller – Low Humidity	3.5 Liter	2 years
WB2091™ Cromax® Pro Blender	3.5 Liter	2 years
WB2095™ Cromax® Pro Blender Additive	1.0 Liter	4 years
WB2075™ Cromax® Pro Activator	0.5 Liter	2 years
WX1700™ – WX 1799™ Special Effect Toners Limited Use Toner	0.5 Liter	3 years

Properties

- Cromax® Pro provides ease of application and accurate color matching.
- The excellent hiding, coverage balance gives significant savings in application time and consumption.
- Meets all VOC Regulations mandating less than or equal to 3.5 VOC Ready To Spray.
- Can be used for spot, panel and overall repair.
- Cromax® Pro requires reduction with Cromax® Pro Controller to achieve Ready To Spray viscosity and proper flake control.

Substrates

All OEM finishes in good condition and DuPont™ 2K primers and sealers.

Product Preparation

Color Tools	Color Tools include ColorNet® with Vindicator™, Acquire Rx™, and X-pert™. See color formula.
Mixing Ratio	Cromax® Pro Blender Up to 10% Controller optional Cromax® Pro Solid Colors 10 to 20% Controller required Cromax® Pro Effect Colors 20 to 30% Controller required Filter with 125 micron or finer strainer. Avoid cotton mesh filter due to swelling.
VOC	Less than or equal to 3.5 VOC Ready To Spray, see Technical Data Page 6 for detailed information.
Pot life at 68° F (20°C)	For optimum application properties use Cromax® Pro basecoat immediately after reduction with Cromax® Pro Controller. Flake control and viscosity of the RTS color will be impacted at four hours, If color is to be stored while in a ready-to-spray state, reduce again with Cromax® Pro Controller prior to application. For optimum color, it is recommended colors containing WB91™ Transoxide Red and Aluminum Effect toners be sprayed in a four hour window after mixing to minimize color shift.
Spray viscosity at 68° F (20°C)	Colors are balanced to achieve sprayable viscosity.

Spray Equipment

	Fluid Tip
Gravity Feed	1.2 - 1.4 mm
HVLP	1.2 - 1.4 mm
Compliant	1.2 - 1.3 mm

Spray Pressure

	Spray Pressure
HVLP	10 psi at the cap
Compliant	20 - 33 PSI

Number of Coats	1.5 coats defined as one medium coat at a gun distance of 8 – 10 inches from the surface and achieving 75% opacity. Without flash time followed by one lighter coat at a gun distance of 12 – 15 inches from the surface.
Flash Time	No flash between coats. Flash till flat before clearcoating

Dry Film Thickness (DFT) and Theoretical Coverage

	Dry Film Thickness	Coverage at Recommended Dry Film Thickness
Solids	1.0 - 1.5 mil	300-500 square feet per gallon
Pearls	0.5 - 0.8 mil	400-600 square feet per gallon
Metallics	0.4 - 0.6 mil	450-650 square feet per gallon

This data relates only to the material designated herein and does not apply to use in combination with any other material or any process.
The data is not to be considered as a warranty or quality specification and we assume no liability in connection with its use.

Recommended Use

Tint Agitation

It is critical to agitate all solid tints for 2-3 minutes on a mechanical shaker before placing them on the mix machine.
Do NOT agitate pearls or metallics before placing them on the mix machine.
The mix machine should agitate for 5 minutes twice a day (i.e. once in the morning, once in the afternoon).

Recommended Use (continued)

Preparation of Color Test Panel

Spray a test panel for each color in order to confirm color match and opacity.
Reproduce the application done on the test panel with the actual application that will be done on the vehicle and respect spray parameters (see "Basecoat Application" section).
Let flash for 30 seconds between the wet coat (coverage) and the half coat (effect coat for color match) – this will better simulate the true application

Surface Preparation

1. Clean surface with water and soap.
2. Degrease with VOC-compliant surface cleaner. Wipe dry with clean cloth.
3. Repair according to damage.
4. **Sanding with no Sealer:**
   - Dry mechanical: P500
   - Dry hand: P800
   - Wet P800 or finer

   Sanding with Sealer:
   - Dry mechanical: P400 with interface pad
   - Dry hand: P500
   - Wet P600 or finer
5. Final Clean with VOC compliant surface cleaner.
6. Wipe dry and tack rag.

Basecoat Application

All Colors:
Apply 1.5 coats, defines as one medium coat at a gun distance of 8-10 inches from the surface and achieving 75% opacity, followed with out flash off by one lighter coat at gun distance of 12-15 inches from the surface.

Apply all coats wet-on-wet, increasing the distance from the gun to the panel as you spray the second pass. Apply an even paint film through dense overlapping (70% or more).

Cromax® Pro WB2075™ Activator

Can be used for Under Hood, Tri Coat, and Two Tone Applications

1. Under Hood Application: Add 10% Cromax® Pro WB2075™ Activator to Cromax® Pro Color followed by controller, for application under the hood without clearcoating.

2. Tri Coats and Two Tone Applications: Add 5% Cromax® Pro WB2075™ Activator to Cromax® Pro Color followed by controller, for Tricoats and Two Tone applications for improved wetting and improved properties for high film build applications.

Drying Cromax® Pro

Cromax® Pro dry times will depend on the relation of relative humidity, airflow, and temperature in the spray booth.
The optimum conditions for accelerated drying of Cromax® Pro are:
• 25% relative humidity, a regular and constant airflow of 300 ft/min, and 104°F (40°C) booth temp.

When the relative humidity in your spray booth exceeds 60%, the airflow can be increased to 500 ft/min. Do not go over that limit to avoid possible paint defects.
Raising the booth temperature will help decrease humidity, it is important not to increase the temperature higher than 104°F 40°C for drying Cromax® Pro.

Clearcoat Application

Use only DuPont™ Refinish clearcoats as directed over Cromax® Pro waterborne basecoat, and only when basecoat is completely flat.

Refer to VOC wall charts for your area to insure compliance with local regulations

Recommended Use (continued)

Equipment Cleaning

There are two primary options for cleaning waterborne spray equipment:

Option 1 – Solvent

- Dispose of excess waterborne material properly
- Follow by DuPont™ 130 acetone rinse. Do not atomize solvent through spray gun.
- Load gun into existing solvent gun washer to remove remaining residue.
- Pre-condition with acetone prior to loading Cromax® Pro

Water option must be used in a separate specific gun cleaner.

Option 2 - Water

- Dispose of excess waterborne material properly
- Follow by de-ionized water rinse
- Load gun into waterborne gun washer to remove remaining residue.
- Blow dry spray gun after removing from gun washer

Water Treatment

Always keep separate waste stream for solventborne and waterborne waste. The polluted water can either be handled as chemical waste or it can be treated with a coagulant that will separate solid from liquid components and reduce your chemical waste.

Storage and Handling

Containers

Cromax® Pro should be mixed and stored in plastic containers or suitable "lined" metal containers. Failure to store appropriate containers will result in an interaction of the paint with the metal container and will destroy the paint quality.

Caution: Some plastic containers may impact product quality due to contamination.

Caution: Colors containing combinations of WB91™ Transoxide Red at or above 10% of formulation and certain aluminum effect toners may generate gas in a sealed container. Use the product within four hours after mixing the color and do not store in a sealed container.

Temperature

Ideally Cromax® Pro should be stored at a temperature of 68°F (20°C) with minimal temperature fluctuation. The absolute range is 32°F to 122°F (0°-50°C).

If the material is exposed to temperatures below 32°F (0°C) for more than a few hours there is a risk of damage to the product in the form of color shift, seed, or gelling. Material that is allowed to freeze will be completely destroyed.

Storage of material between 96°F (36°C) and 102°F (39°C) for greater than 14 days will be at risk of increased viscosity. Materials stored between 103°F (36°C) and 122°F (50°C) for longer than five days will result in damage such as color shift, seed, thickening and gelling. Material exposed to temperature of 140°F (60°C) will be completely destroyed.

Remarks

- Cromax® Pro drying will depend on external conditions (relative humidity, air flow, temperature, etc.).
- Cromax® Pro Mixing Colors have to be thoroughly stirred on a mixing machine before weigh-out and the Cromax® Pro color has to be stirred immediately after weigh-out. Do not use a mechanical shaker to mix ready-to-spray color.
- Spray gun must be stainless steel and dedicated for waterborne application.
- Use plastic cans or suitable steel lined cans.

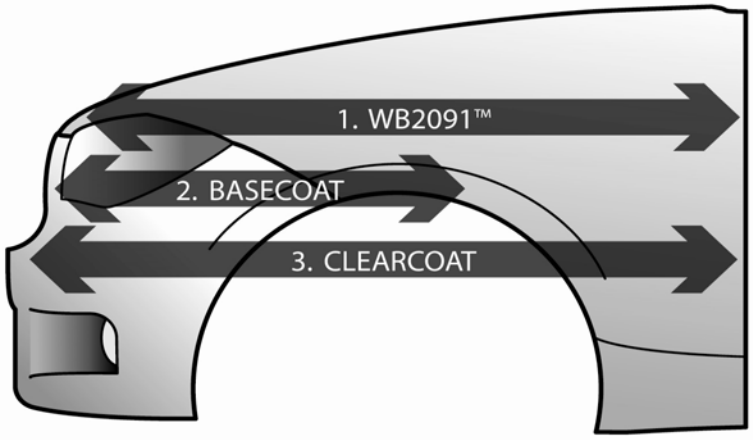
Repair System

Spot Repair

1. Clean surface with water and soap.
2. Degrease with VOC compliant surface cleaners and wipe dry with clean cloth.
3. Repair with recommended undercoats.
4. Sand primed spots as recommended, finish with P500 orbital or P800 wet manual.
5. Prepare complete blending area with 1000 grit hand or machine.
6. Rinse with water and wipe dry.
7. Final wash with VOC compliant surface cleaners.
8. Wipe dry and tack rag.
9. The following spot repair method can be used with use of Blend Coat

With Use of Blend Coat

1. Apply WB2091™ to the blend panel.
2. Apply 1.5 coats of basecoat, extending 2nd coat beyond the previous one, into the wet mid-coat. Apply a 3rd light coat to effect a smooth transition as required.
3. Apply the clearcoat on the entire panel after the last coat of the basecoat is completely flat.



Safety and Handling

VOC Regulated Areas

These directions refer to the use of products which may be restricted or require special mixing instructions in VOC regulated areas. Follow mixing usage and recommendations in the VOC Compliant Products Chart for your area.

For industrial use only by professional, trained painters. Not for sale to or use by the general public.
Before using, read and follow all label and MSDS precautions. If mixed with other components, mixture will have hazards of all components.

Ready to use paint materials containing isocyanates can cause irritation of the respiratory organs and hypersensitive reactions. Asthma sufferers, those with allergies and anyone with a history of respiratory complaints must not be asked to work with products containing isocyanates.

Do not sand, flame cut, braze or weld dry coating without a NIOSH approved air purifying respirator with particulate filters or appropriate ventilation, and gloves.

Technical Data:

Theoretical Coverage Ready To Spray (RTS), at 0.5 mil Dry Film Thickness, 384 - 860 Square Foot Coverage per Gallon
Percent Solids by volume RTS: 12.0 - 26.8%

	As Packaged	Ready To Spray Combinations >>		
	Cromax® Pro Color	Color with: WB2043™	Color with: WB2043™/WB2043™+WB2091™	Color with: WB2043™/WB2043™+WB2091™
Data Category:	min - max	min - max	min - max	min - max
Ratio:	as packaged	1:10%	1:20% / 1:20% + 10%	1:30% / 1:30% + 10%
Density (g/L):	1011 - 1194	1011 - 1177	1010 - 1162	1010 - 1052
Density (lbs/gal):	8.44 - 9.96	8.44 - 9.82	8.43 - 9.70	8.43 - 8.77
VOC As Packaged (g/L):	38 - 142	42 - 69	42 - 129	44 - 124
VOC As Packaged (lbs/gal):	0.32 - 1.18	0.35 - 0.58	0.35 - 1.08	0.37 - 1.03
VOC Less Exempt Solvent (g/L):	185 - 427	193 - 232	199 - 406	209 - 397
VOC Less Exempt Solvent (lbs/gal):	1.55 - 3.56	1.61 - 1.94	1.66 - 3.38	1.75 - 3.31
Volatiles Wt.%	62.98 - 86.25	64.76 - 84.52	66.24 - 85.65	74.90 - 85.42
Water Wt.%	55.81 - 80.20	57.35 - 79.24	58.66 - 79.42	62.52 - 79.12
Exempt Wt.%	0.04 - 1.1	0.08 - 1.1	0.12 - 1.1	0.49 - 0.7
Water Vol.%	61.85 - 81.64	67.64 - 80.36	64.20 - 80.69	65.10 - 80.33
Exempt Vol.%	0.05 - 1.5	0.12 - 1.4	0.17 - 1.4	0.63 - 0.9

	Ready To Spray Combinations >>			Blender	
	Color with: WB2043™ + WB2075™	Color with: WB2043™ + WB2075™	Color with: WB2043™ + WB2075™		
Data Category:	min - max	min - max	min - max	No Additive As Packaged	with WB2043™ @ 10%
Ratio:	1:10% + 10%	1:20% + 10%	1:30% + 10%		
Density (g/L):	1018 - 1170	1017 - 1058	1016 - 1055	1008	1008
Density (lbs/gal):	8.49 - 9.76	8.48 - 9.65	8.48 - 8.80	8.41	8.41
VOC As Packaged (g/L):	66 - 91	64 - 144	65 - 139	48	50
VOC As Packaged (lbs/gal):	0.55 - 0.76	0.54 - 1.20	0.54 - 1.16	0.40	0.42
VOC Less Exempt Solvent (g/L):	226 - 258	229 - 387	238 - 381	227	231
VOC Less Exempt Solvent (lbs/gal):	1.88 - 2.15	1.91 - 3.23	1.98 - 3.18	1.90	1.93
Volatiles Wt.%	61.65 - 79.65	63.25 - 81.66	71.82 - 81.73	82.95	82.93
Water Wt.%	52.88 - 73.06	54.40 - 73.72	58.24 - 73.85	77.43	77.26
Exempt Wt.%	0.08 - 1.0	0.11 - 1.0	0.46 - 0.7	0.73	0.71
Water Vol.%	62.01 - 73.67	59.26 - 74.49	60.45 - 74.59	77.79	77.44
Exempt Vol.%	0.11 - 1.3	0.16 - 1.2	0.58 - 0.8	0.91	0.91

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For more information, call:
Jobbers: 1.800.3.DUPONT
Shops: 1.800.get DUPONT
In Canada: 1.800.668.6945

or visit:
http://www.pc.dupont.com/

DuPont™ Cromax® Pro Technical Manual
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DUPONT® Refinish