

DuPont Automotive Finishes

DuPont™ ChromaOne® Acrylic Urethane Single Stage

Description

ChromaOne® is a productive acrylic urethane designed for spot, panel and overall repairs of OEM Single Stage finishes, both solids and metallics. It delivers good gloss and DOI, goes on easily and dries quickly.

General Information



Components

ChromaOne® Acrylic Urethane Single Stage "G" Color

ChromaOne® 7005S™ Activator

ChromaOne® 7065S™ Low Temp Reducer ChromaOne® 7075S™ Spot/Panel Reducer ChromaOne® 7085S™ Mid Temp Reducer ChromaOne® 7095S™ High Temp Reducer ChromaOne® 7099S™ Very High Temp Reducer

	60°F	70°F	80°F	90°F
Spot Repair	7065S™	7065S™	7075S™	7085S™
Panel Repair	7065S™	7075S™	7085S™	7095S™
Overall Repair	7075S™	7085S™	7095S™	7099S™

Tips for Success

In temperatures above 90°F, use 7099S™ for increased flow and leveling.



Mix Ratio/Viscosity

Mix Ratio (3:1:1)

Mix 3 parts ChromaOne® color to 1 part ChromaOne® 7005S™ Activator and 1 part Reducer.

Viscosity

18 - 20 seconds in a Zahn #2 (DuPont M-222) cup.

Tips for Success

Use the ChromaOne® Mixing Stick for accurate measurements.



Pot Life

2 - 3 hours at 75°F.

Note: When using MasterTint® 389S™ Additive, pot life is reduced to 1 hour at 70°F.



Additives

Accelerator: MasterTint® 389S™; use ¹/₄ ounce per ready-to-spray quart.

Fish Eye Eliminator: DuPont 459S™ Additive; use 1/4 - 1/2 ounce per ready-to-spray quart. Do not use

FEE.

Flex Additive: Plas-Stick® 2350S™ Flexible Additive; use 2 ounces per ready-to-spray quart.

Reducer: ChromaOne® 7065S™/7075S™/7085S™/7095S™/7099S™

Retarder: Not Recommended.



Tinting

ChromaOne® may be tinted up to 5% with MasterTint® mixing colors that are 5.0 VOC. or below.



Flatteners For Low Gloss Coatings

DuPont 4531S™ Flattener

Typical 60° Gloss Reading of 99G Black: 20 gloss units - add 80% flattener



Clearcoat Option

The high gloss of ChromaOne® eliminates any need for clearcoating. However, if clearcoating is desired, the following options are available:

- In the last coat of color: Add one part of ready-to-spray ChromaClear® $G2-4500S^{\text{\tiny M}}$, $G2-4700S^{\text{\tiny M}}$, or $V-7500S^{\text{\tiny M}}$ to one part ready-to-spray ChromaOne® color. Apply this last coat of color/clear mixture directly over the previous coats of color.
- ChromaOne® provides a high-gloss, durable finish. For additional protection against environmental fallout, ChromaClear® *G2-4500S*™, *G2-4700S*™, or *V-7500S*™ may be applied after color has flashed 45 minutes at 75°F.

Tips for Success

Before blending with color, activate ChromaClear® G2-4500S™, G2-4700S™, or V-7500S™ Clearcoat with the appropriate Activator-Reducer.

Application



Substrates

Fill 'N Sand® 131S™ Acrylic Primer Surfacer

DuPont 222S™ Mid-Coat Adhesion Promoter

DuPont 275S™ 2K Waterborne Primer-Filler

DuPont URO® 1120S™/1140S™ Primer-Filler

DuPont URO® 1120S™/1140S™ Primer-Filler with Plas-Stick® 2350S™

DuPont 1141S™/1144S™/1147S™ 2K Urethane Primer-Filler

DuPont 1141S™/1144S™/1147S™ 2K Urethane Primer-Filler with 2350S™ Flexible Additive

Velvaseal® 1986™ Acrylic Sealer

Velvaseal® WPS Waterborne Primer-Sealer

Plas-Stick® 2340S™ Flexible Adhesion Sealer

Low VOC Prime 'N Seal® 27105™/27405™/27705™

DuPont 4001S™/4004S™/4007S™ 2K UltraProductive Primer-Filler

DuPont 4001S™/4004S™/4007S™ 2K UltraProductive Primer-Filler with Plas-Stick® 4150S™ Flex-Additive

ChromaFil® 4140S™ Multi-Use Primer

DuPont 4904S™ 2K UltraProductive Primer-Filler

DuPont 4904S™ 2K UltraProductive Primer-Filler with Plas-Stick® 4950S™ Flex-Additive

DuPont 4910S™/4940S™/4970S™ 2K UltraProductive Primer-Sealer

DuPont 4910S™/4940S™/4970S™ 2K UltraProductive Primer-Sealer with Plas-Stick® 4950S™ Flex-Additive

ChromaPremier® 42410S™/42440S™/42470S™ Sealer

ChromaPremier® 42410S™/42440S™/42470S™ Sealer with Plas-Stick® 2350S™

Tips for Success

For information on ValueShade®, see the Specialty Procedures section.



Surface Preparation

- Prepare all surfaces to be repainted using the recommended undercoat systems, following recommended procedures.
- Finish sand with P400 DA or P500 grit paper dry or wet.
- Mask the entire vehicle to prevent overspray from sticking.
- Tack with appropriate tack cloth prior to applying color.



Gun Setups*

Conventional

Siphon: 1.6 mm - 1.8 mm (.063" - .070") Gravity: 1.4 mm - 1.6 mm (.055" - .063") Pressure: 0.8 mm - 1.2 mm (.031" - .047")

HVLP

Siphon: 1.5 mm - 1.8 mm (.059" - .070")

Gravity: 1.3 mm - 1.6 mm (.051" - .063")

Pressure: 0.8 mm - 1.1 mm (.031" - .043")

LVLP 1.5 mm - 1.7 mm (.059" - .067")



Air Pressure*

All Fiessule		
Conventional	Spot	Panel/Overall
Siphon:	35 - 45 psi @ the gun.	45 - 55 psi @ the gun.
Gravity:	25 - 35 psi @ the gun.	35 - 45 psi @ the gun.
Pressure:	35 - 45 psi @ the gun.	50 - 60 psi @ the gun.
HVLP		
Siphon:	6 - 8 psi @ the gun cap.	8 - 10 psi @ the gun cap.
Gravity:	5 - 7 psi @ the gun cap.	6 - 8 psi @ the gun cap.
Pressure:	5 - 7 psi @ the gun cap.	8 - 10 psi @ the gun cap.

5 - 7 psi @ the gun cap.

Tips for Success

LVLP

For optimum metallic control and appearance, use the best atomizing air cap available.

*The listed setups cover the usual range for various application equipment. For information on specific manufacturers' equipment, see the Appendix section titled "Equipment Information."



Application

Solid Colors and Dark Metallics: Apply 2 - 3 full wet coats until hiding and desired match are achieved. Spray each coat to achieve flow.

Light Metallics: A few very light metallics may require mist coating to achieve mottle control. Apply 2 - 3 full wet coats of color. On the last coat of color, mist coat panel by panel as necessary to achieve a uniform metallic appearance. Do not wait to finish the entire vehicle before mist coating.

Tips for Success

For a few particularly difficult light metallics, this advanced technique can aid final gloss and flake control:

- Activate ChromaOne® 7040G™ Metallic Binder at 3:1:1 with ChromaOne® 7005S™ and the same reducer being used in the color.
- In the last coat, mix ready-to-spray color with the above ready-to-spray ChromaOne® 7040G[™] at a ratio of 3:1.
- Spray the final coat full wet and mist coat panel by panel as necessary.

8 - 10 psi @ the gun cap.



Flash/Dry Times

Air Dry

Flash between Coats: 5 - 10 minutes.

Dust Free: 30 minutes.

Time to Handle (Assemble): 6 - 8 hours.*

Time to Polish: 12 - 24 hours.*

Time to Stripe: 12 - 24 hours.*

Time to Deliver: 12 - 24 hours.*

Force Dry

Flash before Force Dry: 10 minutes.

Force Dry Cycle Time: 30 minutes @ 140°F. Dust Free: At cool down.

Time to Handle (Assemble): 1 hour after cool down.
Time to Polish: 1 hour after cool down.
Time to Stripe: 1 hour after cool down.
Time to Deliver: 4 - 6 hours after cool down.

Infrared Dry Refer to the Infrared Guide for specific setup recommendations.

^{*}To speed up through-cure, use DuPont 389S™ at a rate of 1/4 ounce per ready-to-spray quart.



Blending

Panel repair is the approved procedure for Single Stage warranty repairs. This allows the refinisher to attain the recommended film builds. If the refinisher chooses to blend, use DuPont ChromaSystem 19301S™ Blender.

- After the final coat of single stage, step-out the coating by mixing 1 part DuPont ChromaSystem 19301S[™] Blender to 1 part of the remaining material and taper the blend with the resulting mixture.
- Place DuPont ChromaSystem 19301S[™] Blender in a clean spray gun and taper the blend edge for final melt-in of the blended edge.

Tips for Success

As an alternative to blending, apply ChromaClear® G2-4500S™, G2-4700S™ or V-7500S™ Clearcoat over the Single Stage repair out to the panel edge on styling line.



Recoatability/Re-repair

ChromaOne® may be recoated at any stage of dry or cure. If recoating after 24 hours, scuff sand with P600 grit or finer.



Polishing

Optimum Times

Air Dry: Allow 12 - 24 hours before polishing.

Force Dry: Allow one hour cool down and polish within 24 hours.

Sanding

Use 1500 grit wet or finer. Or use P1500 DA or finer.

Note: Use caution when sanding or polishing. Cutting too deeply into the film may cause a color ring effect. This can be repaired only by applying another coat of color over the sanded areas.

Compounding

Use finishing compound. Apply a thin ribbon of material to the area to be compounded. Use a wool pad. Maintain air polisher or variable speed buffer at 1800 - 3000 rpm. Remove excess finishing compound with a clean soft cloth prior to applying finishing polish.

Polishing

Use finishing polish. Apply a ribbon of material to work a 2 - 3 foot square area. Using a foam pad, maintain a variable speed buffer at 1200 - 1800 rpm. Keep the polisher/buffer moving at all times. Overlap each pass approximately 50%. As finishing polish begins to dry, stop polishing. Wipe off excess polish with a clean soft cloth, or glaze with an orbital buffer.

Tips for Success

- The high gloss of ChromaOne® Single Stage eliminates the need for clearcoating. However, if a clearcoat is desired to simplify cutting and polishing, apply ChromaClear® G2-4500S™, G2-4700S™ or V-7500S™ Clearcoat over the Single Stage repair out to the panel edge or styling line.
- If extensive sanding or polishing of ChromaOne® is anticipated, first apply a coat of ChromaClear® $G2-4500S^{m}$, $G2-4700S^{m}$ or $V-7500S^{m}$ Clearcoat over the color.
- Polishing of ChromaClear® metallics is not recommended.
- Do not use medium to heavy-duty compounds.
- Use clean cloths and pads to insure that the color does not get scratched with dirt particles from old or re-used cloths or pads.
- Do not wax for the first 120 days after painting.



Cleanup

Clean spray equipment as soon as possible with DuPont Lacguer Thinner.

Physical Properties

VOC: 5.0 lbs/gal (maximum) ready-to-spray.

Theoretical Coverage: 536 sq. ft. per ready-to-spray gallon at 1 mil.

Weight Solids: 47.5% ready-to-spray. Volume Solids: 33.4% ready-to-spray.

Recommended Dry Film Thickness: 2.0 - 3.0 mils in 2 - 3 coats.

Flash Point: See MSDS.

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 and usage recommendations in the VOC Compliant Products Chart for your area.

Safety and Handling

WEAR A POSITIVE-PRESSURE, SUPPLIED-AIR RESPIRATOR (NIOSH APPROVED TC-19C), EYE PROTECTION, GLOVES AND PROTECTIVE CLOTHING WHILE MIXING ACTIVATOR WITH PAINT, DURING APPLICATION AND UNTIL ALL VAPORS AND SPRAY MIST ARE EXHAUSTED. Follow respirator manufacturer's directions for respirator use. INDIVIDUALS WITH HISTORY OF LUNG OR BREATHING PROBLEMS OR PRIOR REACTION TO ISOCYANATES SHOULD NOT USE OR BE EXPOSED TO VAPOR OR SPRAY MIST. Do not permit anyone without protection in the painting area.