



DuPont Automotive Finishes

## DuPont™ ChromaClear® G2-4700S™ (Hyper Cure™ - Air Dry and Express Bake)

### Description

ChromaClear® G2-4700S™ is a second generation version of ChromaClear® 4700S™. ChromaClear® G2-4700S™ is not only the world's fastest air dry or express bake clear, it also revolutionizes energy savings and productivity. Further, the second generation (G2) version provides improved appearance and application latitude depending on the activator chosen (ChromaClear® G2-4507S™, G2-4508S™ or G2-4509S™ Activators). This 4.2 VOC three-component clearcoat can be used for spot and multi-panel repairs of OEM base/clear finishes.

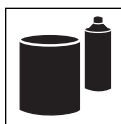
***This product eliminates the typical 30 minutes x 140° F baking cycle normally required to process clearcoat. It air dries in 1.5 hours at 70° F, and can be express baked (10 min. x 120° F) for even faster delivery. That is, 10 min. (total cycle time, including temp. ramp up) x 120° F booth temp. setting, not substrate temp. (a) The energy savings alone makes this clearcoat more profitable to use than any other clear, including generic clears.***

***(a) Beware: When competitors claim (10 min. x 120° F), they typically refer to time at substrate temperature. This actually translates into a 20-25 minute cycle at 140-150° F booth temperature setting (this means more time, and higher energy costs than ChromaClear® G2-4700S™).***

ChromaClear® G2-4700S™ must be used with new activators (ChromaClear® G2-4507S™, G2-4508S™ and G2-4509S™ Activators). However, it still uses ChromaPremier® Reducers and a mix ratio of 3:1:1 by volume. This product can be applied over DuPont ChromaSystem™ Basecoats and replaces ChromaClear® 4700S™ Clear and ChromaClear® 4505S™ and 4507S™ Activators.

### General Information

#### Components



- ChromaClear® G2-4700S™ Clearcoat
- ChromaClear® G2-4507S™ Production Activator (65-75° F)
- ChromaClear® G2-4508S™ Medium Temp. Activator (75-85° F)
- ChromaClear® G2-4509S™ Appearance Activator (>85° F)
- DuPont ChromaSystem 19301S™ Blender

#### Reducers for 4.2 lbs./gal. VOC:

- ChromaPremier® 12365S™ Fast Reducer
- ChromaPremier® 12375S™ Medium Reducer
- ChromaPremier® 12385S™ Slow Reducer
- ChromaPremier® 12395S™ Very Slow Reducer

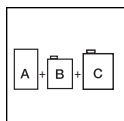
@ 4.2 lbs./gal. VOC

Application Temp.	70° F	80° F	90° F	100° F
ChromaPremier® Reducer	12365S™	12375S™	12385S™	12395S™

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### Tips for Success

For optimum appearance it is important to choose the correct ChromaPremier® Reducer for the temperature range (see above), and the activator that meets your dry time and appearance requirements. ChromaClear® G2-4507S™ provides the fastest dry time and ChromaClear® G2-4509S™ provides the best appearance. Further, allow the sealer to flash for 20 min. before applying basecoat. If application enhancement is desired to match OEM clearcoat orange peel, use 1-2 oz. of DuPont 19379S™ Application Enhancer per ready-to-spray quart of activated clearcoat.



### Mix Ratio/Viscosity

Combine the components either by volume or weight, then mix thoroughly.

#### For 4.2 lbs./gal. VOC

	Volume	Weight (cumulative qt.)
ChromaClear® G2-4700S™ Clear	3	548 grams
ChromaClear® G2-450XS™ (7, 8 or 9) Activator (b)	1	748 grams
ChromaPremier® 12375S™ Medium Reducer	1	908 grams

(b) do not use ChromaClear® 4505S™ or 4507S™ Activators.

With ChromaPremier® 12365S™ Fast Reducer, total is 909 grams

With ChromaPremier® 12385S™ Slow Reducer, total is 904 grams

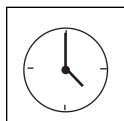
With ChromaPremier® 12395S™ Very Slow Reducer, total is 915 grams

### Viscosity

15 - 17 seconds in a Zahn #2 (DuPont M-222) cup.

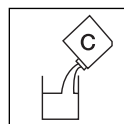
### Tips for Success

Use mixing stick for accurate measurements.



### Pot Life

1-2 hours at 70° F (depending on activator used).



### Additives

Application Enhancer: DuPont 19379S™ Application Enhancer; use 1 to 2 ounces per ready-to-spray quart. This additive will also extend pot-life, may improve appearance and reduce orange peel, and can be used to reduce clearcoat hardness under high temperature and high humidity application conditions.

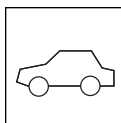
Accelerator: Not required.

Fish Eye Eliminator: DuPont 659S™ Additive ([silicone free] use 0.5-1.5 oz per ready-to-spray quart), or DuPont 459S™ Anti-Cratering Additive (use 0.25 to 0.5 oz per ready-to-spray quart).

Flex Additive: Only needed if optimum performance is required. Add 2 oz. Plas-Stick® 2350S™ Flexible Additive per ready-to-spray quart of activated clearcoat or use Plas-Stick® 2350S™ as described below.

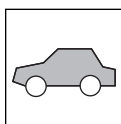
@ 4.2 lbs./gal. VOC	Volume	Weight (cumulative qt)
ChromaClear® G2-4700S™ Clear	9	450 grams
ChromaClear® G2-4507S™ Activator	3	617 grams
Plas-Stick® 2350S™ Flex Additive	1	668 grams
ChromaPremier® 12375S™ Reducer	3	805 grams

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## Basecoats

ChromaBase® Basecoat  
ChromaPremier® Basecoat



## Application

### Substrates

ChromaBase® Basecoat  
ChromaPremier® Basecoat  
DuPont 222S™ Mid-Coat Adhesion Promoter for blend areas



## Surface Preparation

For application over a properly prepared basecoat repair:

- Mask the entire vehicle to protect from overspray.
- Allow basecoat to dry 15 - 30 minutes prior to clearcoat application.
- Extend basecoat dry time to 30 minutes when applying several base color coats, tri-coat colors, or in cooler shop conditions.



## Gun Setups\* 4.2 VOC

*Conventional*

Gravity Feed	1.3 mm - 1.6 mm (.051" - .063") (c)
Siphon Feed	1.4 mm - 1.8 mm (.055" - .070")

*HVLP*

1.3 mm - 1.4 mm (.051" - .055")

(c) 1.5 - 1.6 mm DeVilbiss and 1.4 SATA



## Air Pressure\* 4.2 VOC

*Conventional*

35 - 45 psi @ the gun

*HVLP*

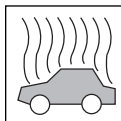
8 - 10 psi @ the gun cap

\*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

Apply 2 full coats.



## Flash/Dry Times

**Do not use IR heat. It may cause the clearcoat to solvent pop.**

*Air Dry*

For Optimum Appearance

Flash between Coats:	7 - 10 minutes
Dust Free:	15 - 20 minutes
Time to Handle (Assemble):	1.5 - 2.5 hours
Time to Polish:	1.5 - 2.5 hours (d)
Time to Stripe:	1.5 - 2.5 hours
Time to Deliver:	1.5 - 2.5 hours
Time to Decal:	24 hours

**(d) Although the clearcoat may fingerprint slightly at 1.5 hours, it will polish very well.**

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### Express Dry

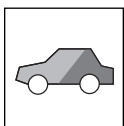
Flash between coats:	7 - 10 minutes
Flash before Force Dry:	none
Cycle Time:	10 min (total cycle time) X 120° F (booth temp., not substrate temp.)(a)
Dust Free:	out of express dry
Time to Handle (Assemble):	30 - 60 minutes
Time to Polish:	30 - 60 minutes
Time to Stripe:	1 - 2 hours
Time to Deliver:	45 minutes
Time to Decal:	24 hours

**(a) Beware: When competitors claim (10 min. x 120° F), they typically refer to time at substrate temperature. This actually translates into a 20-25 minute cycle at 140-150° F booth temperature setting (this means more time, and higher energy costs than G2-4700S™)**

Examples for optimum bake cycles (e):

Application Temp (ambient)	Bake Cycle (min)	Approx. Final Part Temp
70° F	10 min x 120° F	110° F
80° F	10 min x 120° F	115° F
90° F	10 min x 120° F	120° F

(e) If ChromaClear® G2-4700S™ is baked at higher temperatures than described above, dieback may occur.



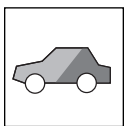
### Blending

Panel repair is the approved procedure for clearcoat warranty repairs. This allows the refinisher to attain the recommended film builds. If the refinisher chooses to blend, use DuPont ChromaSystem 19301S™ Blender. Since this blender is higher solids, it is crucial to maintain air pressure (20 - 25 psi) when using this versus a blender like ChromaClear® 7601S™ Blender where air pressure is typically reduced (10 - 15 psi) during application.

- Carefully taper the second coat of clear beyond the first.
- After the final coat of clearcoat, step-out the coating by mixing 1 part DuPont ChromaSystem 19301S™ Blender to 1 part of the remaining clearcoat and taper the blend with the resulting mixture.
- After the final coat of clear has been blended with the mixture of DuPont ChromaSystem 19301S™ and clearcoat, further reduce the mixture and use the same gun to finish melting-in the edge.

### Tips for Success

For sail panel blending, be sure DuPont 222S™ is applied beyond the intended clearcoat area.



### Recoatability/Re-repair

ChromaClear® G2-4700S™ Clearcoat may be recoated 1 h @ 90° F or 2h @ 70° F air dry. If the clear is force dried, wait 1 hour. If recoating after 24 hours, scuff sand with 1200 - 1500 grit. Also, use activated basecoat (ChromaBase® or ChromaPremier®).



### Polishing

#### Optimum Times

Air Dry:	1.5 - 2.5 hours
Express Dry:	45 - 60 min. after cool down

### Sanding, Compounding, Polishing

The optimum technique for removing dirt is as follows:

#### 1. Sanding:

- Sand with 1500 grit wet or finer or use a foam interface pad with P1500 DA or finer.

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### 2. Compounding:

- Apply a ribbon of rubbing compound to the area that was sanded or contains sandscratches.
- Maintain air polisher or variable speed buffer at 1400 - 1800 rpm. Remove excess finishing compound with a clean soft cloth prior to applying finishing polish.
- Use a wool pad and an effective rubbing compound (e.g., 3M Perfect-it II).
- (Less favorable: Foam pad and 3M Extra Cut Perfect-it III rubbing compound. Further, if a foam pad is used, it will not remove sandscratches as easily.
- (If reduction in hardness is desired, add 1 - 2 oz Plas-Stick® 2350S™ Flexible Additive or 1 - 2 oz DuPont 19379S™ Application Enhancer per ready-to-spray quart to moderate hardness.

### 3. Polishing:

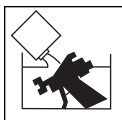
- Apply a ribbon of polishing material to the area to be polished.
- Maintain a variable speed buffer or an orbital polisher at 1400 - 1800 rpm.
- Use a foam pad and an effective polishing compound. Keep the polisher/buffer moving at all times. Overlap each pass approximately 50%. As finishing polish begins to dry, stop polishing. Wipe off excess finishing polish with a clean soft cloth.
- Hand buff with a clean soft cloth as a finishing touch.

### Tips for Success

- Always use clean water to wet sand and add a few drops of soap to help clear the paper.
- Always use a foam interface pad when DA sanding.
- Use clean cloths and pads to insure that the clear 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 immediately with DuPont Lacquer Thinner.



### Physical Properties

@ 4.2 lbs./gals. VOC RTS

Theoretical Coverage:	655 sq. ft. per ready-to-spray gallon at 1 mil
Weight Solids:	47.6% ready-to-spray
Volume Solids:	40.86% ready-to-spray
Recommended Dry Film Thickness:	2.0 - 2.4 mils in 2 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

Before using any DuPont product, be sure to read all safety directions and warnings. WEAR A POSITIVE-PRESSURE, SUPPLIED AIR RESPIRATOR (NIOSH TC-19C), EYE PROTECTION, GLOVES AND PROTECTIVE CLOTHING WHILE MIXING ACTIVATOR WITH PAINT, DURING APPLICATION AND UNTIL ALL VAPORS AND SPRAY MISTS 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 BE EXPOSED TO THIS PRODUCT. Do not permit anyone without protection in the painting area. This product is intended for industrial use only by professional, trained painters.

