



Refinish

DuPont™ ChromaClear® G2-4500S™
(Hyper Cure™ - Bake and Air Dry)

Description

ChromaClear® G2-4500S™ boosts throughput and saves energy with a very short force-dry process. It is a three component clear for use on spot, multi-panel and overall repairs of OEM base/clear finishes. This clear is designed to increase production by maximizing vehicle throughput and allowing for immediate vehicle delivery, if it is baked properly. Further, ChromaClear® G2-4500S™ offers excellent application, buffability and appearance under bake or air-dry processing conditions. ChromaClear® G2-4500S™ Clearcoat can be used over ChromaSystem™ Basecoats. It can be used with ChromaPremier® reducers to obtain 4.2 lbs./gal. VOC.

This product eliminates the traditional 30 min. x 140° F baking cycle normally required to process clearcoat. In fact, the bake cycle can be reduced by 50%. That is, 10-15 min. total cycle time, including temp. ramp up x 160° F booth temp.

Compare this cycle to clears specifying metal temperature cycles of 15 min x 160° F which can translate to a 30 minute bake cycle at 180° F. G2-4500S™ saves you time in the booth and it reduces your energy consumption during bake.

General Information



Components

- ChromaClear® G2-4500S™ 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

	65° F	75° F	85° F	95° F
Spot	ChromaPremier® 12365S™	ChromaPremier® 12365S™	ChromaPremier® 12375S™	ChromaPremier® 12375S™
Multi-Panel	ChromaPremier® 12365S™	ChromaPremier® 12375S™	ChromaPremier® 12385S™	ChromaPremier® 12365S™
Overall	ChromaPremier® 12375S™	ChromaPremier® 12385S™	ChromaPremier® 12385S™	ChromaPremier® 12365S™

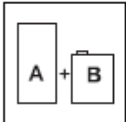
Tips for Success

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.



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Mix Ratio/Viscosity

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

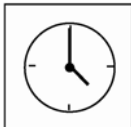
For 4.2 lbs./gal. VOC	Volume	Weight
ChromaClear® G2-4500S™ Clear	3	543.0 grams
ChromaClear® G2-450XS™ (X=7,8 or 9) Activator (a)	1	743.5 grams
ChromaPremier® 12375S™ Med. Reducer	1	905.2 grams

Viscosity

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

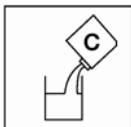
Tips for Success

- Use mixing stick for accurate measurements.
- Correct reduction and activators can improve cure and final appearance.



Pot Life

1.5 - 2.5 hours at 70° F



Additives

- Application Enhancer: DuPont 19379S™ Application Enhancer; use 1-2 ounces per ready-to-spray quart. This additive will also extend pot-life, may improve appearance and reduces orange peel, and can be used to reduce clearcoat hardness under high temperature and high humidity application conditions.
- Accelerator: Use 1/2 ounce MasterTint® 389S™ per ready-to-spray quart. Use of accelerator under force dry (bake) conditions may lead to dieback.
- Fish Eye Eliminator: DuPont 659S™ Additive [silicone free] use 0.5 to 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® G2-4500S™ Clear	9	509.1 grams
ChromaClear® G2-4507S™ Activator	3	697.1 grams
Plas-Stick® 2350S™ Flexible Additive	1	753.9 grams
ChromaPremier® 12375S™ Reducer	3	905.5 grams



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Flash/Dry Times

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

Force Dry

Flash between coats:	8 - 12 minutes
Flash before Force Dry:	None
Cycle Time:	10-15 minutes X 160° F (booth temperature) (a)
Dust Free:	Out of force dry
Time to Handle (Assemble):	When cool
Time to Polish:	When cool
Time to Stripe:	When cool
Time to Deliver:	When cool
Time to Decal:	24 - 48 hours

a) Beware of clearcoats that specify a 15 min x 160° F bake at substrate temperature. This actually translates into a 25-30 min. bake cycle at 170-180° F booth temperature setting. This means more time, and higher energy costs than G2-4500S™.

Examples for optimum bake cycles:

<u>Total Bake Cycle</u>	<u>Booth Temp (° F) (not substrate temp.)</u>
15 min.	160° F
13 min	180° F
5 - 10 min.	199° F

Note: If immediate delivery is not required, it is possible to reduce energy costs even further by performing a very short bake to get the clear dust free [5 min.(cycle time) x 160° F (booth temp.)]. Using this process it is possible to sand the clear to remove dirt within 1 hour if needed (if the ambient temp. is above 75° F).

<i>Air Dry @ 70° F</i>	<u>Air Dry</u>	<u>Air Dry (with MasterTint® 389S™)</u>
Flash between Coats:	8 - 12 minutes	8 - 12 minutes
Dust Free:	15-30 minutes	15 - 25 minutes
Time to Handle (Assemble):	3 - 5 hours	2 - 4 hours
Time to Polish:	3 - 5 hours	2 - 4 hours
Time to Stripe:	3 - 5 hours	2 - 4 hours
Time to Deliver:	3 - 5 hours	2 - 4 hours
Time to Decal:	24 - 48 hours	24 - 48 hours

Examples for Air Dry times to buff versus temperature:

	ChromaClear® G2-4507S™	ChromaClear® G2-4509S™
70° F	3 hours	5 hours
80° F	2 hours	3.5 hours
90° F	1 hour	2.5 hours



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Blending

Panel repair is the approved procedure for clearcoat warranty repairs. This allows the refinisher to attain the recommended film builds.



Recoatability/Re-repair

Clearcoat may be recoated during any stage of dry or cure. If recoating after 24 hours, scuff sand with 1200 - 1500 grit.

Polishing

Optimum Times

Force Dry:	After cool down
Air Dry:	3-5 hours

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.

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.
- (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 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.
- Do not use medium to heavy-duty compounds. 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.



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Cleanup

Clean spray equipment as soon as possible with DuPont™ Lacquer Thinner.

Physical Properties

@ 4.2 lbs/gal. 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 usage and recommendations in the VOC Compliant Products Chart for your area.

Safety and Handling

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.

Please visit: www.performancecoatings.dupont.com to view or print an addition copy of this "Technical Product Data" sheet.



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The miracles of science™

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