



Introduction

Hydrochrome Extreme is a very versatile product which can be applied to most substrates. The B800 basecoat, the silver layer and B311 topcoat and Crystal Clear Ceramic (exterior use) all bond perfectly together to form one complete coating.

This creates a very durable surface and enables it to withstand temperatures up to 90°C. It will pass a full cross hatch adhesion test, making it ideal for uses such as engine bays and engine casings and enabling it to be used in hot climates.

Its been UVB tested 3 years with 15% fade (hardly noticeable when comparing to untested item)

Hydrochrome Extreme is perfect for classic car restoration items (trim, hubcaps, badges, door handles, interior dashboard components etc).

Custom Creation Paints strongly recommends that individuals unfamiliar with this type of coating system should practice with sample pieces first to understand the process fully.

We run demo days once a month on a Wednesday 2-4 if you wish to come along and see the process send an email to accounts@customcreationpaints.co.uk this will need to have your mobile number and details of the the items you will looking to coat.

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PROCESS OVERVIEW

Step 1: Spray the correct 2 part primer for your substrate and leave to fully cure.

Step 2: Spray on the B800 clear gloss basecoat and bake for 2 hours at 60°C or you can add in our Quick cure additive an allow to cure 25C for 24 hours this is available from our webshop.

Step 3: Within 24 hours, spray on silver solutions.

Step 4: Spray the Violet tinted topcoat.

Step 5 : For Exterior use the crystal clear topcoat.

KIT CONTENTS

Tip: This system has been packaged into four packs in order of use. It is best to only unpack each pack as required for preparation.

Pack 1:

- Basecoat B800
- Catalyst C801
- Thinner T803

Pack 2:

- Wetting Agent
- Activator
- Anti oxidant
- T.D.S meter

Pack 3A:

- EX1
- EX2
- EX3

Pack 4:

- Topcoat Base B311
- Catalyst C311
- Thinner T311
- Violet Dye



ADDITIONAL ITEMS NEEDED FOR APPLICATION

1. Spray booth
2. Compressor

Compressor: Ensure the air feed from the compressor to the spray gun is perfectly clean and moisture free - minerals in the compressed air can cause contamination.

Tip: A good way of testing the rinsing water is to spray some water through the spray gun system into a plastic cup and then use the TDS meter provided to test the mineral content of the water.

As the water that goes in to the spray gun it will be 0:00 by the time it has come out of the gun mixed with air from the compressor it should read 0:00 if the TDS rises you will need to use one of our desiccant Hydropure Air Guardian filters inline this will remove the tail end water vapor from the compressed air.

3. Low bake oven capable of reaching 60°C or a drying cabinet with a heater, or a room that will heat upto 25 c for 24 hours for when using our Quick Dry additive.
4. Fluid catcher tray (to collect chemicals for disposal)
5. Turntable.
6. Spray gun for applying the basecoat and topcoat. (1mm or 1.3mm needle set up)
7. Jigs for holding items to be sprayed. Jigs enable items to be moved without being touched and keep them clear from splashes from waste fluids.

Tip: Use a hot glue gun to fix the items to your jig. Set them at an angle so that the fluids run off easily.

8. Approximately 25 litres of mineral free water .This must have a mineral content reading of 0.00 on the electronic TDS meter provided. Water filters can be purchased from our web shop.

IMPORTANT:

Only use mineral free water for all stages of this process.

9. Spray mask (See MSDS health and safety information for each product)

10. Protective gloves and eye protection.

11. Accurate measuring scales.

MIXING INSTRUCTIONS WITHOUT QUICKCURE (2 hours 60c)

Shake all concentrates well before mixing.

BASECOAT (PACK 1)

	%	RATIO	MASS IN GRAMS				
BASE 800	100%	10	50	100	200	500	1000
CATALYST 801	70%	7	35	70	140	350	700
THINNER T803 (Can be thinned up to 40%)	30 - 40%	3 - 4	15 - 20	30 - 40	60 - 80	150 - 200	300 - 400
TOTAL MIX			100	200	400	1000	2000

MIXING INSTRUCTIONS FOR BASECOAT WITH QUICKCURE (24 hours 25c)

Shake all concentrates well before mixing.

BASECOAT (PACK 1)

	%	RATIO	MASS IN GRAMS				
BASE 800	100%	100	50	100	200	500	1000
QUICK CURE	3%	3	1.5	3	6	15	30
CATALYST 801	70%	70	35	70	140	350	700
THINNER T803 (Can be thinned up to 40%)	30 -40%	30 - 40	15 - 20	30 - 40	60 - 80	150 - 200	300 - 400
TOTAL MIX			101.5-106.5	203 -213	406 - 426	1015 - 1065	2030 - 2130

WETTING AGENT (PACK 2)

Expiry date: See labels on bottles (up to 1.5 year)

7 days shelf life once mixed (after this time you will need to pass through a paint filter)

Mix and add to the spray gun or Hozelock Trigger sprayer bottle.

	%	RATIO	MASS IN GRAMS			
PURE MINERAL FREE WATER		122	122	244	488	976
WETTING AGENT		3	3	6	12	24
		TOTAL MIX	125	250	500	1000

ACTIVATOR (PACK 2)

Store in a cool dark place. Expiry date: See label on bottle (up to 6 months)

Warning once mixed set the digital countdown timer, this will ensure you are notified once the 5 hours is complete. Using activator older than 5 hours will lead to the reflective layer delaminating.

Mix and add to spray gun or Hozelock Trigger sprayer bottle.

	MASS IN GRAMS
PURE MINERAL FREE WATER	500
ACTIVATOR	4 drops

ANTIOXIDANT (PACK 2)

1.5 year shelf life in concentrate form.

1 month shelf life once mixed.

Mix and add to spray gun labeled ANTI-OXIDANT or Hozelock Trigger sprayer bottle

	%	RATIO	MASS IN GRAMS			
PURE MINERAL FREE WATER	100	50	100	500	1000	2000
ANTIOXIDANT	2	1	2	10	20	40
		TOTAL MIX	102	510	1020	2040

SILVERING SOLUTIONS (PACK 3)

Expiry date: See labels on bottles (up to 1 year)

1-month shelf life once mixed in summer, 2 months in winter.

The same total quantity of EX1/EX2 and EX3 must be mixed each time. These are used in equal amounts.

The water and silvering solutions should all be kept and used at room temperature. Cold solutions will take longer for the chemical reaction to occur.

Mix up EX1/EX2 solutions.

Always add water first, then add EX1 and EX2 separately. NEVER mix EX1 and EX2 together without water. RISK OF REACTION.

Replace lid and mix solutions thoroughly

Mix up EX3 solution using the mixing ratios in the chart and shake bottle well.

		RATIO	MASS IN GRAMS			
EX1 / EX2 SILVER AGENT CONCENTRATE	Pure mineral free water	18	144	360	720	1440
	EX1	5	40	100	200	400
	EX2	2	16	40	80	160
	TOTAL MIX		200	500	1000	2000
		RATIO	MASS IN GRAMS			
EX3 SILVER AGENT CONCENTRATE	Pure mineral free water	4	160	400	800	1600
	EX3	1	40	100	200	400
	TOTAL MIX		200	500	1000	2000

TOPCOAT (PACK 4)

	%	RATIO	MASS IN GRAMS				
BASE B311	100%	5	100	250	500	1000	2000
CATALYST C311	20%	1	20	50	100	200	400
THINNER T311	25%		25	62.5	125	250	500
Violet tint Add 0.3 - 0.4% of total mixed topcoat			0.43 - 0.58	0.7	1.4	4.35 - 5.8	8.7 - 11.6
TOTAL MIX			145	362.5	725	1450	2900

Tip: when adding the violet tint to the topcoat, ensure you are very accurate. Adding too much will create a darker shade of chrome. If you are applying a coloured chrome there is no need to add in the Violet tint.

CRYSTAL CLEAR TOPCOAT (exterior UV ceramic)

	%	RATIO	MASS IN GRAMS				
CRYSTAL A BASE	100%	5	50	100	250	500	1000
CRYSTAL B CATALYST	100%	5	50	100	250	500	1000
CRYSTAL C THINNER	20% (Can be thinned up to 40%)	1 (2 if you thin 40%)	10 - 20	20 - 40	50 - 100	100 - 200	200 - 400
TOTAL MIX			110 - 120	220 - 240	550 - 600	1100 - 1200	2200 - 2400

APPLICATION INSTRUCTIONS

Achieving the highest mirror-like reflectivity lies in the surface preparation of the object you are spraying. The smoother, more "glass-like" the surface is, the more reflective the final appearance will be.

Apply the correct 2K primer for the substrate first. Once this has fully cured, polish up the surface going through the grades and finish with 800 wet dry paper so it's smooth and blemish free.

Notes about previous coated items-

Ensure any use of Ispon filler type product that they are properly mixed before hand and allowed to fully outgas of before a primer is applied, as any heavy out gassing will cause the silver to discolor over time. Ensure you only ever use 2k products.

Maztec Monkey metal must be primed with a 2k Epoxy primer 1st.

SPRAYING ON THE 800 GLOSS BASECOAT

The basecoat must be sprayed evenly.

1. Apply the mixed clear chrome 2K basecoat using standard spray gun settings with one light coat followed by one full wet coat – apply as wet as you can without it running.
2. Allow the first wet coat to flash off for 15 minutes and then apply a second coat.
3. Allow to flash off for 45 minutes before placing it into an oven at 60°C for 2 hours.

Tip: It's a good idea to have a play with this product, as it really will flow out like glass if you put enough on!

VERY IMPORTANT:

DO NOT touch the base coated surface, as finger marks will be visible in the chrome effect. Any grease or contaminants will stop the activator from bonding to the surface.

DO NOT use solvent-based degreasants on the surface; this will cause problems with the chrome. If you have touched the surface, use a water-based degreaser then rinse thoroughly with mineral free water.

The silver layer must be completed within 24 hours of the baking schedule otherwise the silver will Delaminate.

APPLYING THE SILVER LAYER

IMPORTANT:

Wetting agent, activator, anti-oxidant and the silvering chemicals all need to be mixed before beginning the silvering.

Always check the desiccant air guardian filter before starting. If all the desiccant has turned green, replace all desiccant before beginning to silver.

IMPORTANT

Steps 1-6 must be completed immediately after one another.

For a quicker chemical reaction warm the rinse water to 20c !

1. When spraying on the mixed wetting agent, saturate the whole area, then rinse off using the water rinse system until the water runs clear.

A NOTE ABOUT WETTING AGENT

This product is designed to break the surface tension to enable the water and solution to flow over a painted surface. If water is not sheeting over the surface after application of the wetting agent, reapply the wetting agent and re-rinse. If there are still places where the water breaks, there are contaminants on the surface. Use a water-based cleaner and start again. Repeat the process until water sheets over the surface. This process enables the activator and silver solutions to flow freely over the surface giving an even effect.

2. Spray on the activator covering the whole surface area then rinse off with water. **Do not leave the activator on too long as it may burn the basecoat and leave light white marks on the final finish.**
3. Spray on the silver solutions quickly with a light layer making sure the surface gets a nice brownish grey colour. Then apply more silver until the surface is shiny silver. You will know when the reaction has finished as the waste run of water will turn clear.
4. **Never release the trigger halfway through the silvering process always keep the finger on the trigger at all times.**
5. Rinse off the item with water.
6. Spray a light coat of antioxidant and leave for 10 seconds followed by a final rinse off with water.
7. Using clean compressed air, blow dry the item until all the water has been pushed/evaporated off. Until the object is completely dry, there will be visible watermarks on the surface. To be 100% of a perfect reaction there should be no change in the colour when drying and comparing wet with the dried area, if it looks yellow when wet then clear when dry there is a problem with the silver spray mix..
8. Place the sprayed item into a warm oven at 30°C for 20 minutes to remove the remaining moisture in the silver layer.

SPRAYING ON THE B311 GLOSS TOPCOAT

This can be applied as soon as the remaining moisture from the silver layer is removed. Remember the longer the silver layer is left before top coating, the more chance of dust contaminants falling on the surface.

When clear lacquer is applied on top of chrome it gives the chrome a golden yellow appearance. Adding violet dye will counteract this, as it is the opposite end of the colour spectrum to yellow.

1. After mixing the topcoat, carefully add the correct amount of violet tint (or a candy concentrate style tint if a coloured chrome is desired) into the topcoat before applying the mixed clear coat.
2. Apply a semi-wet coat first with air set at 29psi bar at the needle and a small amount of product coming out.

Tip: *Do not apply a wet coat on first as it will attack the silver and leave pinholes on the final finish.*

3. Once the semi-wet coat has been applied, half trigger the spray gun so only air comes out and blow over the surface to help dry off the paint.
4. Leave for 20 minutes to flash off, and then apply a light coat followed by a wet coat as normal.

For External use apply the Crystal Clear Ceramic

When applying the Ceramic topcoat (Crystal Clear) leave the B311 to flash off for 30 minutes then apply one wet coat of the Crystal Clear, *do not under any circumstance bake the Crystal Clear it will damage the crosslinking process, leave to dry at 20C touch dry after 1 hour, 24 hours it can be polished.*

This can then be left to air dry. Full paint properties will be achieved after 7 days.

COLOURED CHROME

For a coloured chrome effect, do not add the violet tint.

Standard Tints: Add 1g of concentrated coloured tint to 100g of mixed topcoat.

Tip: *Start with a small amount of dye to topcoat ratio (as above) and add more if needed after spraying a test coat. If too much tint is added the brilliance of the chrome will be lost.*

Tip: *The coloured tints can also be mixed to achieve other colours. Add 1g of mixed tint to 100g of topcoat.*

Gold tint: 1g per 100g will give a 9-karrot gold effect. To achieve a 24-karrot effect, either apply two further coats (leaving it to flash off in between coats) or, add 3g per 100g and spray one

TROUBLE SHOOTER

PROBLEM - Silver has come out uneven. I can see the basecoat under it.

SOLUTION – Ensure the water was sheeting when applying the activator. The likely cause is that there was grease/contaminant on the surface. Use a water-based cleaner and rinse well at least twice then start again.

PROBLEM - I have applied the topcoat and it looks smoky.

SOLUTION - There is moisture left in the silver layer. Put the item in an oven at 30°C for 20 minutes. Ensure the item is getting up to temperature and there are no cold spots in the oven, or place next to a warm hot air heater if no oven is available.

PROBLEM - I have applied the silver layer and there are white ghost marks in the silver.

SOLUTION – 1 This may be case of activator burn. The activator has either been left on too long, or has not been rinsed enough.

When silvering a larger items its important you wet the whole item with the silver spray then work round the item creating the reflection.

PROBLEM - I have just applied the silver and placed it in an oven. After 20 minutes I can see a misty rainbow effect.

SOLUTION - The oven temperature is too high. The 2K basecoat has softened due to the heat and contaminated the silver layer. The heat only needs to be low (30°C) for 20 minutes. Check the oven is working correctly and maintains a consistent temperature. Ideally use an infrared thermometer.

PROBLEM - I am spraying the silver and I'm getting a strange contamination around the edges of the item.

SOLUTION - This could be one of two things:

- 1) The activator may not have been rinsed correctly and it has just gathered around the edge.
- 2) The back of the item has not been cleaned correctly so the rinsing water may have dripped round and touched the unclean back of the item, then contaminated the edge. When preparing items for spraying, clean the back as well as the surface being sprayed and spray the primer and 2K basecoat at least 3 inches in from the edge to prevent this problem.

PROBLEM – The item I have coated has turned yellow.

SOLUTION – Its important that EX1/2 – EX3 mix the same it must always be a 50/50 mix when spraying if to much EX1/2 has been applied with no EX3 to reduce it you will have unreduced silver sitting on the surface that will turn yellow very quickly.

Another reason can be if you are coating freshly made moldings that have not been given enough time to Degases fully.

Coating Maztec type monkey metal unless you use a Epoxy primer it will turn yellow over time.

Using normal automotive topcoats over our system will discolor the silver over time due to the type of curing agent used in most 2k products.

If you have a unknown substrate or an unknown paint system always use a 2k epoxy primer 1st.

PROBLEM – I have very poor adhesion between the layers.

SOLUTION - This could be one of two things:

- 1 The activator only has a 5 hour shelf life once mixed.
- 2 After the bake you must coat the item within 24 hours(missed time window)

HEALTH AND SAFETY

IMPORTANT:

Please read all Material Safety Data Sheets for all products related to this process before use.

DISPOSAL OF CHEMICALS

IMPORTANT: NEVER TIP ANY CHEMICALS DOWN THE DRAIN. All chemicals must be collected and disposed of as hazardous waste. See MSDS for further information.

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