



Hydrochrome Extreme® is a very versatile product as it can be applied onto most substrates once the correct 2k primer has been applied. The 2K basecoat the silverlayer and topcoat all bond perfectly together to form one complete coating making it very durable and enabling it to withstand temperatures up to 60°C.

This product has been independently tested to the ISO 16474 (part 3 cycle) after 500 hours chamber time there was just slight discoloration, in layman's terms very good result indeed!

Most other systems that we have tested look ok until the silvered surface gets a hard knock with something like a stone, then the topcoat peels off the silver or the silver peels off the basecoat. This is just not the case with Hydrochrome Extreme® it will withstand a full cross hatch adhesion test.

We are that confident in our coating that sprayed samples are available to buy from our web shop. Try a crosshatch test on it yourself and see the durability we are offering.

If you are not familiar with this type of reflective coating system you will need to spray out a few samples first to understand how it works.

Ok here is a brief overview. It's a four-step procedure to get nice bright reflective finish.

- Step 1: Spray the correct 2K primers for your substrate.
- Step 2: Spray on the 2K clear gloss primer coat then bake for 2.5 hours at 60°C.
- Step 3: Spray on silver solutions.
- Step 4: Spray the Violet tinted topcoat.

ADDITIONAL ITEMS NEEDED FOR APPLICATION

1. Spray booth
2. Low bake oven capable of reaching 60°C or a drying cabinet with a heater for the oven bake basecoat for the Air dry a room capable of reaching 20c for 24 hours.
3. Fluid catcher tray and mini turn table.
4. A spray mask for 2K paints for applying the basecoat and topcoats. Do not use any type of carbon mask, it needs to be able to filter out isocyanates B1 classification. You will also need rubber gloves and eye protection.
5. Spray gun for applying the basecoat and topcoat. (Topcoat will need a 1.3mm Or 1.4mm needle set up)
6. A water-based spray gun for rinsing between the stages.
7. Jigs for holding items to be sprayed to enable you to move the items around without putting fingerprints on them and keep them clear from splashes from waste fluids.
8. Approximately 10 liters of mineral free water (also known as RO water). This must have a mineral content of 0.00 (use the electric TDS meter that comes with the kit to check the mineral content reading).

MIXING INSTRUCTIONS

Shake all products well before mixing.

OVEN CURE BASECOAT

	%	RATIO	WEIGHT IN GRAMS			
BASE	100%		100	250	500	1000
CATALYST	15%		15	37.5	75	150
THINNER	30%		30	75	150	300
TOTAL MIX			145	362.5	725	1450

AIR DRY BASECOAT

	%	RATIO	WEIGHT IN GRAMS			
BASE	100%		100	250	500	1000
CATALYST	70%		70	175	350	700
THINNER	20%		20	50	100	200
TOTAL MIX			190	475	950	1900

WETTING AGENT

Mix then add to your pressure pot or Hozelock trigger sprayer bottle.

1-year shelf life in concentrate form. 3 days shelf life once mixed after this time it will become bitty and will need to be filtered.

	%	RATIO	WEIGHT 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

Mix and add to your pressure pot or yellow Hozelock bottle.

1-year shelf life in concentrate form it's very important that the lid is replaced after use, as this product will ruin if not sealed straight after use.

Once mixed wait 30 minutes before use and use **with-in 5 hours** this will ensure you get a crisp bite into the basecoat.

	%		WEIGHT IN GRAMS			
PURE MINERAL FREE WATER	100	-	100	500	1000	2000
ACTIVATOR	2	-	2	10	20	40
	TOTAL MIX		102	510	1020	2040

ANTIOXIDANT

Mix then add to your pressure pot or yellow Hozelock bottle.

1 year shelf life in concentrate form. 1-month shelf life once mixed

	%	RATIO	WEIGHT 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:

1-year shelf life in concentrate form. 2-month shelf life once mixed, the same total quantity of EX1/2 and EX/3 must be mixed

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

Mix up EX1/2 solutions using the mixing ratios in the chart.

Always add water first, then add EX/1 and EX/2 separately.

NEVER mix EX/1 and EX/2 together without water. RISK OF REACTION.

Mix up EX/3 solution using the mixing ratios in the chart below, 1 liter of each solution will cover 15-20sqft depending on temp and size of the item being covered.

		RATIO	WEIGHT IN GRAMS			
EX1/2 Silver Agent Concentrate	Pure mineral free water		950			
	EX/1		25			
	EX/2		25			
	TOTAL MIX		1000			
		RATIO	WEIGHT IN GRAMS			
EX/3 Silver Agent Concentrate	Pure mineral free water		950			
	EX/3		50			
	TOTAL MIX		1000			

TOPCOAT (PACK 4)

	%	RATIO	WEIGHT IN GRAMS				
BASE	100%	5	100	250	500	1000	2000
CATALYST	20%	1	20	50	100	200	400
THINNER	25%		125	62.5	125	250	500
Violet tint Add 0.3 - 0.4% of Total mixed topcoat			0.73 – 0.98	1.08 – 1.45	2.17 – 2.90	4.35 – 5.8	8.7 – 11.6

APPLICATION INSTRUCTIONS

Spraying on the 2K gloss basecoat.

The surface preparation of the object you are painting the smoother, more "glass-like" your surface is the more reflective the final appearance will be. It is crucial that this is sprayed evenly.

Once you have applied the correct 2K primer over your item and it's fully cured, abrade it with 1500 grit paper so it's nice and smooth and blemish free.

Apply the mixed clear chrome 2K gloss 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. If a second coat is needed, leave it 15 minutes between coats. This should then be left to flash off for 20 minutes before being placed into an oven at 60°C for 2.5 hours **SILVER MUST BE APPLIED WITHIN 12 HOURS** of it coming out of the oven **OR YOU WILL HAVE ADHESION PROBLEMS!**

Important Air-Dry Basecoat Notes

If you are using the air-dry basecoat, you must ensure not to apply too much product as this will prolong the drying time and create problems when applying on the topcoat, the items coated must be left in warm room 20c for 24-48 hours before silvering, the silver must be applied within 12 hours.

In some cases, it may take 48 hours due to how much the basecoat has been applied, It's important to leave each layer of applied basecoat to flash off for 20 minutes (let the solvents escape) before applying the next coat.

If the correct amount of Airdry basecoat has been applied 24 hours at 20c will suffice.

Don't forget about your night time temperature's as if the temp falls below 20c the evaporation of the thinner will stop and the dry time will be prolonged you have been warned.

Please spray out a few metals spray out cards leave for the time stated silver topcoat then once fully cured we recommend you do a cross hatch tape pull test. This will ensure you cured it properly in your environment.

VERY IMPORTANT:

DO NOT touch the base coated surface otherwise you will see finger marks in the chrome effect as any grease or contaminant will stop the sensitizer from bonding to the surface. Do not use solvent-based degreasants on the surface as 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.

SPRAYING ON THE SILVER LAYER:

IMPORTANT: Wetting agent, activator, anti-oxidant and the silvering chemicals all

need to be mixed before beginning the silvering.

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

1. When spraying on the mixed wetting agent you will need to saturate the whole area then rinse off using your water rinse system until the water runs clear. This product is designed to break the surface tension to enable 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 again 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 will enable the activator to flow over and in turn allow the silver to flow over.
2. Spray on the activator making sure to cover the surface area then rinse off with the water. **Do not leave on the activator for too long as it may burn the basecoat and you will be left with light white marks on the final finish, if you are coating larger items mix the activator at 1%**
3. Spray on the silver solution, making sure to saturate the whole area 1st, then work from the bottom upwards applying the silver solution until the item is nice and bright.
4. Once you have a bright silver coating rinse well with Mineral free water.
5. You are then ready to apply the Anti-Oxidant, Saturate the whole area leave for a few seconds, then rinse off again using mineral free water.
6. At this point you will need to dry the silver using clean dry air, take the air blower gun then starting from the middle pushing the water to the edges of the item, keep the air blower gun as close to the surface as possible this will aid the drying process. If there are complicated cutouts and holes it's always best to dry these areas 1st, then work on the main area again pushing the water to the edges, On much larger parts it may take 2 people to help with the drying process.
7. Once dry place the sprayed item into a warm oven at @20°C for 20 minutes to take out the remainder of the moisture in the silver.
8. You need to be aware of leaving the unprotected silver close to open windows and away from natural daylight so to protect from UV rays.

TOPCOAT APPLICATION:

Do not apply on wet the first coat as it will attack the silver and leave you with pinholes on the final finish. Once the semi-wet coat has been applied half trigger your gun so only air comes out and blow over the surface to help dry off the paint. Leave for 20 minutes to flash off, follow by a nice wet coat as normal.

This can then be left to air dry. Full paint properties will be achieved after 7 days, after this time cross hatch test can be done. We would not recommend in using an oven to cure the final stage due to the oven creeping over 60c

If you wish to use an oven to dry the final layer your need to keep the temperature below 60C otherwise the base layer will resoften and create havoc to the silver layer. We would recommend a temperature of 45C to allow for temperate fluctuations.

COLOURED CHROME:

If you are looking for a coloured chrome effect, the violet tint is not required. The measurements given below is a good starting point, as if too much tint is added you will lose the brilliance of the chrome underneath. On the gold tint, 1g per 100g will give you a 9 carrot gold effect. To achieve a 24 carrot effect, either apply two more coats (leaving it to flashoff in between coats) or add 3g per 100g instead of 1g and spray one coat.

The coloured tints can also be mixed together to achieve your own bespoke colours. Add 1g of your mixed tint to 100g of topcoat to start with then apply more coats to achieve the shade required, we would recommend experiment with the dyes to get used to applying them.

If you are coating old chrome/bright work or Maztec monkey metal you will need to apply a 2k epoxy primer this will ensure a nice strong foundation.

TROUBLE SHOOTER:

PROBLEM - Silver has come out all blotchy. I can see the basecoat under it!

SOLUTION - You need to make sure when applying the wetting agent you have covered the whole surface. If water breaks start to appear when you rinse after applying the wetting agent, apply another coat of wetting agent, then rinse well, making sure there are no water brakes. The water must be flowing over the substrate in one wet sheet. This will enable the activator to flow over when used. If the item is still not wetting up then there is grease/contaminants on the surface. Use a water based cleaner and start again from the wetting agent procedure.

PROBLEM - I have applied the topcoat and it looks all misty under it!

SOLUTION - Sounds like there is moisture left in the silver layer. You need to make sure it goes into an oven at 20°C for 20 minutes. Make sure the item is getting up to temperature and there are no cold spots in the oven.

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

SOLUTION - You have put the item in the oven at too high a temperature. The 2K basecoat has softened due to the heat and this has played havoc with the silver. The heat only needs to be a low 20°C for 20 minutes. Check your oven is working correctly and maintains a consistent temperature. Ideally use one of our infrared thermometers available from our webshop.

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) You may not have rinsed the wetting agent or activator properly and it's just gathered around on the edge.
- 2) The back of the item you have been spraying has not been cleaned so the rinsing water may have dripped round and touched the unclean back of the item, then contaminated the edge. When prepping items for spraying clean the back as well as the surface being sprayed and spray the primer and 2K basecoat at least 3 inch in from the edge to prevent this problem on the back.

PROBLEM – I've done a cross hatch tape pull test after 7 days and the silver has delaminated.

SOLUTION – This could be 1 of 4 things that have affected the adhesion.

- 1) The base primer has closed due to your timings being off, it's imperative you apply the silver within 12 hours of the basecoat being cured. It's important when

using the Air dry you run your test panels to ensure they have been cured Correctly.

2) When the solutions EX1/2 - EX3 are applied it's imperative the solutions are sprayed on 50/50 this is why it's important the double nozzle silvering gun is running true.

If the EX1/2 is spraying more than the EX3 you will have unreduced silver on the surface this will lead to delamination and will also cause your item to turn yellow after a few weeks as the silver need to be reduced correctly.

The same applies when using the Dual Chamber trigger Sprayer bottle it's important that its 100% clean to ensure a 50/50 fluid flow.

One of the signs to watch for that your double nozzle spray gun is not running true, you will notice a slight yellowish tinge that disappears when at the drying stage of the silver.

The same applies if the item is over reduced (to much EX3) you will notice a slight blueish tinge at the point of drying. Being slightly over reduced does not affect the adhesion of the silver to the basecoat.

3) The activator has not been used within the 5-hour time window.

4) The cross-hatch tape pull test has been done to early, it takes a full 7 at 20c days for the 3 stage coating to reach its full properties

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