



HYDROCHROME EXTREME KIT APPLICATION GUIDE

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 silver layer 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 term's 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. 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 solution's.
- 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.

If you are using a spray gun for water rinsing, make sure your air feed from your compressor to your spray gun is perfectly clean and moisture free as there are minerals from the minerals in the compressed air which will play havoc with the silver! A good way of testing your rinsing water is to spray some water through your spray gun into a plastic cup then use the TDS meter to test the mineral content of the water.
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 litres 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).

It's a good idea to use a high temp glue gun to fix the items to your jig. Set them at an angle so that the fluids run off

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 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 with out 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 item must be left in warm room 20c for 24-48 hours before silvering the silver must be applied within 12 hours. 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 metal 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. Keep spraying until its nice bright, you will find if is cold there will be a slight delay so its good to pull back a little and watch the silver appear.
4. Using clean compressed air, blow dry the surface dry.
5. Place the sprayed item into a warm oven at @5°C for 20 minutes to take out the remainder of the moisture in the silver.

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.

COLOURED CHROME

If you are looking for a coloured chrome effect, do not add the violet tint. This is a good start, 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 carot gold effect.

To achieve a 24 carot effect, either apply two more coats (leaving it to flash off in between coats) or add 3g per 100g instead of 1g and spray one coat. The coloured tints can also be mixed to achieve your own colours. Add 1g of your mixed tint to 100g of topcoat.

If you are coating old chrome/bright work or Maztec monkey metal you will need to apply a 2k epoxy primer this will ensure and 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 30°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 30°C for 20 minutes. Check you 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 of 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.

HEALTH & SAFETY

Please read all Material Safety Data Sheets for all products before use.

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Please use these pages to take notes as you go along.

