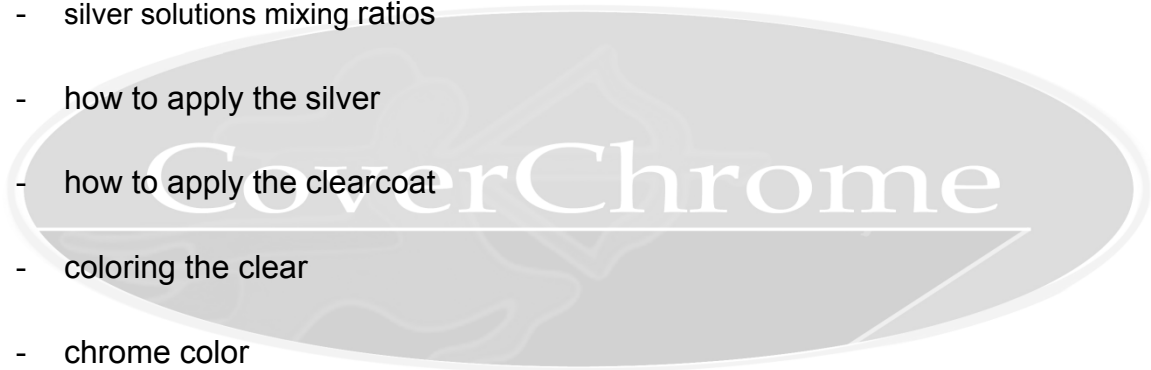




# MANUAL

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## Important Parameters

To produce a high quality mirror like surface there are some very important parameters:

### **The air:**

The used compressed air is one of the most important requirements to get a perfect finish.

The used air has to be absolutely clean, means it must be free of water, oils and all other contaminants.

We recommend to use a refrigeration dryer and a 3 step filtration system

### **The water:**

High quality bi-distilled or de-ionized water is an absolutely must. Check the water quality with a TDS Meter. The TDS Meter should always show 000. This is the quality we need for getting a perfect shiny silver.

If the water quality is 001 or higher the silver layer can get a yellow hue which gets worse when the TDS value gets higher.

To be sure to have high quality water we offer bi-distilled water and machines too.

### **The mixing ratios:**

It is very important to mix up the products exactly right. All the products are mixed up by weight, not by volume!

### **The technique:**

The technique to apply perfect layers of paints is hard to explain because every person has his own way. We try to explain one way on the following sides. Feel free to find your own way by doing some experiments.

The most important thing is to apply the paint without any dust, orange peel or other imperfections. Cause all these imperfections are visible in the finished surface!

## Preparing the surface

Before you apply the primer for the silver layer it's very important to do perfect bodywork. It is fine to use all the products a "normal" painter uses for his preworks.

We recommend to use only 2K products!

Example:

We want to explain the bodywork on a sandblasted bumper:

1. mount the bumper in the way your are able to move it and reach near by the complete surface, also the backside.
2. Check the surface. It should have a smooth surface.
3. Clean the surface very well with degreaser, also the backside.
4. Apply a layer of Epoxy primer on the complete bumper, cause also the backside has to be protected against rust.
5. After the Epoxy is dry ( check the technical data sheets of the product you use), sand it lightly.
6. Now it's time to remove small dents or holes with 2K polyurethane . Use the product according to manufacturer's instructions. Sand it till the the surface is smooth.
7. Clean the surface again very carefully with degreaser.
8. Apply as much layers as needed of a 2K surfacer to get a smooth and shiny surface.
9. After the surface is dry sand it up to 800 grid. Take care that no sanding marks are visible after sanding with 800grid.
10. Check the surface that its smooth and no imperfections are visible.
11. Clean the surface with degreaser

Now it's ready for the primer!

## The products

### Primer:

CS800	primer for the silver
CS801	hardener
CS802	thinner

To us the CS800 primer it is very important to bake the primer up to 60°C (temperature measured at the part, not in the room) for about 2 hours, it depends how thick you have applied the primer. You can also let it dry by air for 24 hours by room temperature (25 C) adding the additive AD105 quick.

### Metallizing:

CS408	Preactivator
CS410	Activator
COVER4 + G4/2	Silver solution
COVER5	Reducer
OXY1	Antioxy solution

## Clearcoats

CS402	solvent based clearcoat
CS401	hardener
CS403	thinner

These both clearcoats are for protecting the silver layer. For indoor used parts we normally use the CS402.

For outdoor used parts it's important to use the CVP0201 or Kristal after the 402.

### **Additives:**

AD103                      Additive for adhesion

and anti scratch. This additive offers you

2 options.

1. To create a scratch resistant surface add 3% to the CVP0201.
2. Add 3% of this additive to the primer when you want to apply the primer on critical surfaces. The additive will give a great adhesion for example on glass. Important!!!!!!

When you use the AD103 with the primer, give this layer a flashtime from about 20 minutes than apply another layer of primer without the additive.

### **Tints**

We offer you 9 different colors of transparent tints to color the CS402. Feel free to mix them to create the color you like.

## Mixing Ratios

**All our products are mixed up by weight, not by volume.**

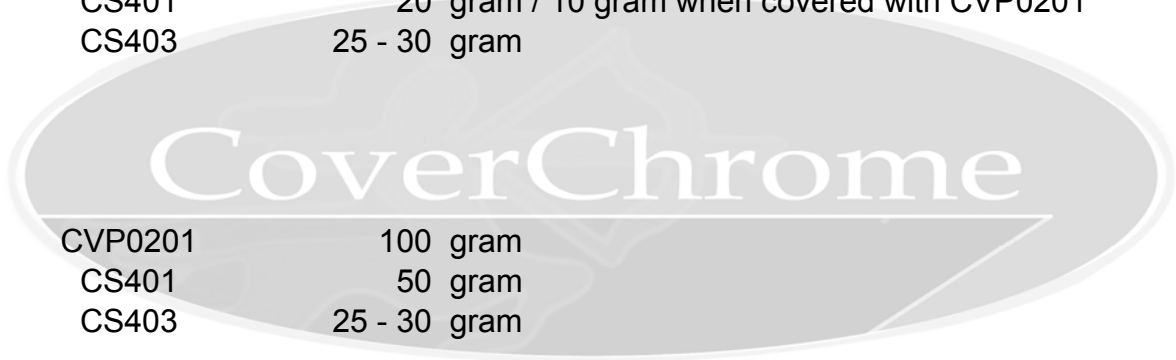
Please take care that you mix up exactly!!!

### Primer

CS800	100 gram
CS801	70 gram
CS802	30 gram
AD105	option: 3% (if you can't bake it)

### Clearcoat

CS402	100 gram
CS401	20 gram / 10 gram when covered with CVP0201
CS403	25 - 30 gram



CVP0201	100 gram
CS401	50 gram
CS403	25 - 30 gram

Example:

Mixing up the CS800

Put a mixing cup on the scale and add 100 gram of CS800 and 70 gram of CS801.

Stir it well then add 30 gram of CS802. Stir it well.

Now it's ready to use!

## How to apply the primer

For a perfect mirror finish it's very important to apply a smooth and shiny layer of primer.

Take care that the primer is applied wet enough so it can flow together to produce a smooth and shiny surface.

Check the surface of the primer by watching the reflections . They should be like a mirror.

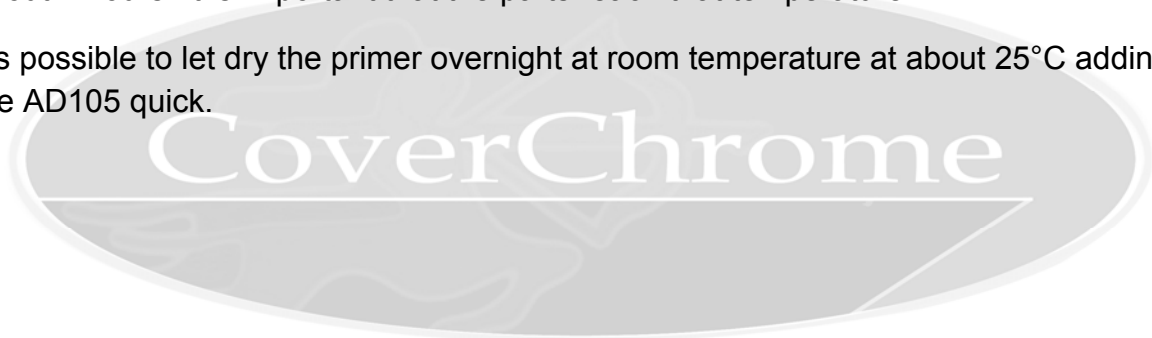
**No orange peel or distortions should be visible.**

## How to dry the primer

CS 800

To produce an amazing adhesion it is very important to bake this primer by 60°C for about 2 hours. It is important that the parts reach that temperature.

It's possible to let dry the primer overnight at room temperature at about 25°C adding the AD105 quick.





## Silver solution mixing ratios (5 lt. ready to use)

### **COVER4:**

1Liter COVER4

3,6 Liter bi-distilled water

0,4Liter COVER4/2

### **COVER5**

1Liter COVER5

4Liter bi-distilled water

### **Preactivator**

1000 gram bi-distilled water

40 gram preactivator concentrate CS 408

### **Activator**

1000 gram bi-distilled

8 drops of Activator Conc.CS410

**Important!!!!!! MIX IT UP EXACTLY!!!!!!**

### **Antioxy**

100 gram bi-distilled water

2 gram antioxy concentrate OXY1

## How to apply the silver

After the primer is dry and all the solutions for the silvering are mixed up it is time to apply the silver layer.

Take care that the compressed air is clean and the water is checked with the TDS meter. It has to be 000. For a better and faster chemical reaction warm up the water up to 20 C.

1. Apply the pre activator. It is possible to apply this solution by using a hand pump bottle and always filter it. Take care that the complete surface has a closed wet layer, if not, you can apply it again.
2. Rinse the surface including the backside.
3. Apply the activator. It's possible to apply this solution by using a hand pump. Take care that the complete surface is covered with a closed layer.
4. Rinse the surface very well and also the backside and check if there is a closed water
5. Apply the silver solution by using the double nozzle pressured air gun. Move fast and cover the surface first with a light layer so the surface gets a brownish grey color. Then apply more silver till the surface is shiny silver. To know when the reaction is done, you will see the waste liquid transparent.
6. Rinse the surface and also the backside. If there are areas left without a shiny silver it's fine to repeat step 5.
7. Apply the anti oxy solution with a hand pump bottle. One wet layer is enough. Let the solution stay on the surface for 10 seconds.
8. Rinse the surface and backside very well.
9. Start blowing dry the part from the top to the bottom using a blower. To be sure to get a perfect reaction, while drying the halo disappears must be transparent if it is not, it means that there is some problem in silver mix. Take care that the complete surface incl. the backside is dry. It's fine to use a soft towel to dry the backside to pick up big water drops.

We recommend to let dry the silvered parts for about 30 minutes up to 1 hour by room temperature before applying the first clear coat layer.

## **How to apply the clearcoat**

After the parts are silvered and had an additional dry time so the complete humidity has gone, it's time to protect the silver layer applying the clear coats.

### **CS402**

Because of this clearcoat is solvent based it has to be applied a little bit different. I prefer to apply this clear with an air pressure at the intake of the gun of 29 psi and small quantity of product.

The first layer has to be a thin semi wet layer. It is fine when the clear don't flow together. After the first layer give the part a flash time from about 15 minutes. After the flash time apply another normal wet layer so the surface becomes shiny again and the clear runs together. It is fine to dry this layer in the oven at about 40°C.

Add the chrome color in this clearcoat only.

The dry time is about 1,5 up to 2 hours. This doesn't mean that the clear is completely dry but its fine to apply the finishing layer.

### **CVP0201**

This clear is the finish one. I prefer to apply this clear with an air pressure at the intake of the gun of 29 psi.

One wet layer is enough. Take care that no orange peel is visible.

We recommend to use the additive AD103 also. This will give a very resistant surface.

### **KRISTAL CLEAR**

You can apply this special clearcoat instead of the CVP0201 to get the best antiscratch, 1 normal hand is good, it has very hi solid, it dries at air temperature (20°C), touch free after 1 hour, the day after you can polish it, in 2 days it's completely reticulated.

### **Coloring the clearcoat**

To produce mind-blowing color effects it is a great idea to add tints to the first layer (CS402).

We offer 9 different tints. It is fine to mix them to create nearby any color.

Mixing the clear with tints:

Add tints up to 8% of the amount of clear. Normally it is enough to use 1% up to 2%. The more tints are added the more powerful and dark the color will come out.

It's always a good idea to check the mixed color on a test part before applying on the customer's part.

### **Mixing the chrome color**

To create a chrome look add 0,7 gram (more or less, depends of your needs) of chrome color to 100 gram of CS402.

Then add the hardener and thinner. Stir well before applying the paint on the part. It is fine to apply multiple layers till you got the chrome color that is fine for you.

Don't forget the flash time between each layer to avoid runnings.

