

Kölner Instacoll System Spray Application Instructions

It is possible to apply Instacoll Base to a perfect standard using special Kölner brushes. However, sometimes it is preferable to use spray application, particularly on larger surfaces and items. When sprayed following the instructions below you can create a superb finish that's even better than brush application. Spraying Instacoll Base is easy so long as you use professional equipment and follow instructions. Instacoll Base is not sprayed in the same way as paint or varnish, please follow the steps below carefully.

Equipment

There is a wide range of spraying equipment available to buy today (e.g. hobby, semi-professional, etc.). For a perfect result, you should always use professional-quality equipment. The



manufacturer of the Instacoll System tested with SATA brand spray equipment and achieved good results. Any other similar high-end brand should would just as well. The main factor in the quality of the finish is the accuracy and skill of the craftsperson applying it.

It is necessary to work with a compressor with an air tank, the tank itself should have at least a capacity of 350 litres. A higher capacity tank is better, this helps maintain a consistent pressure. To avoid contamination of the Instacoll product we recommend keeping the pressurised air pure - when spraying Instacoll always use a water separator and at least one or two oil separators.

Apart from the compressor and air tank you will need a spray gun (e.g. SATA mini-jet HVLP) and a nozzle. When choosing a spray gun, it is important to choose one that

measures air pressure. A digital pressure gauge is preferable as it is more precise. When spraying it is important to keep pressure around 1 Bar. Somewhere between 0.9 and 1.2 is also acceptable. You will need a 1mm nozzle for a small spray gun and a larger, 2mm nozzle for larger sprayers.

Please note - Make sure all equipment is perfectly clean before spraying. If the spray equipment was previously used for other paint we recommend thoroughly cleaning the equipment. Disassemble the gun and clean it, paying attention to the interior, nozzle, mixing cup and spray body. Once clean, leave to dry and ensure no residual solvent is left behind.

Surface Preparation

The result of the finish is heavily influenced by the preparation of the surface.

Porous Surfaces (unfinished stone/plaster) - Coat the area with a diluted mix of Instacoll Base and demineralised water (Instacoll Base 85% / Water 15%). Once this has dried the surface is ready for spraying.

Wood - Use a suitable wood primer to prime untreated wood.

Metal - To prevent contact oxidation between the metal surface and the gold and leaf and to protect the metal from weathering and corrosion any metal surfaces must be thoroughly prepared. First prime the metal with a suitable metal primer, following the manufacturer's instructions. Then, we recommend applying paint to further protect the metal. For indoor projects a single coat of water-based acrylic paint should be enough. Items that are to go outdoors need more protection. For outdoor projects, we recommend using 2 coats of a suitable high-gloss paint, preferably an alkyd (oil-based) or combination alkyd/polyurethane paint. This layer should be lightly scuffed with an ultrafine Scotchbrite pad to prove a key for the Instacoll Base.

Plastic - A smooth plastic layer is best primed with a suitable plastic primer. These are generally available in a aerosol spray, such as Rustoleum Plastic Primer.

Powder Coated Surfaces - Instacoll Base cannot be sprayed onto powder-coated surfaces. An appropriate primer should be used to prepare the surface before application.

When spraying Instacoll Base on a varnished surface, or one finished with high-gloss paint, the layer needs to be matted. We recommend using an abrasive pad (such as an ultrafine Scotchbrite pad) to scuff the surface before application.



Spray Booth

The spray booth needs to be clean and free of dust. Spray booths are often over-pressurised to keep dust out, but this may create overspray when using Instacoll Base. We recommend keeping the door of the booth open slightly if the booth is over-pressured. This will help equalise the pressure.

The temperature within the booth should be moderate, a temperature between 20-23°C is ideal. Never use higher temperatures to forcefully dry the Instacoll Base.

We highly recommend doing test pieces before starting with your project. This will help you get a feel for the spraying procedure and the correct way to apply the Instacoll Base to your project. Only start working on your item or project after you have practised the procedure a few times.

Make sure that there is always a water-jet nearby. If you are unhappy with the way the spray has applied you can spray the Instacoll off the surface with a water-jet up to 10 minutes after application. After this you will need to use ethanol to remove the Instacoll and this is time consuming.

Preparation of the Material (Instacoll Base High Gloss, Matt and Instacoll HA (High Active))

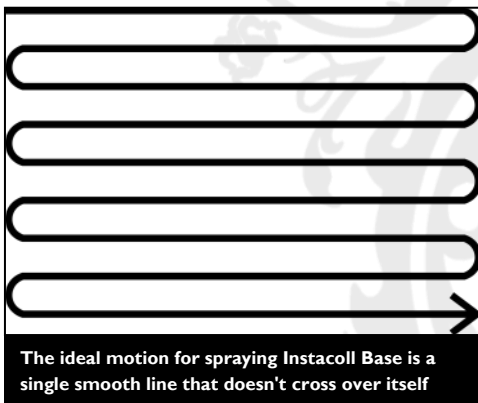
Do not leave any Instacoll Base in an opened container, or leave it to stand in the mixing bowl. Instacoll Base dries quickly and will form a skin almost instantly.

The Instacoll Base must be diluted with demineralised water before spraying. If you are spraying onto a horizontal surface thin between 7-10%, if you are spraying onto vertical surfaces then thin 5%. If the object has both horizontal and vertical surfaces then we recommend thinning with 5% water. When adding the water to the Instacoll Base it should be slowly stirred into the mix. It can take several minutes of stirring before the product and water is mixed enough. Never shake or mechanically mix the product as this will introduce air into the Instacoll Base. This will create small bubbles in the finish that will burst later, creating pinholes in the gilding. If the material has been shaken and a foaming has developed on the surface then we recommend leaving it a couple of hours to settle in a sealed container.

When pouring the product into the mixing cup of the spray-gun it should always be done through a paint strainer (190 micron).

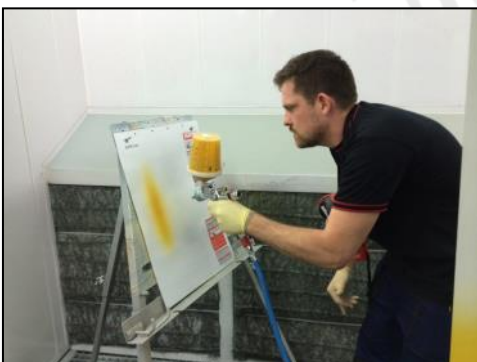
Workplace Setup

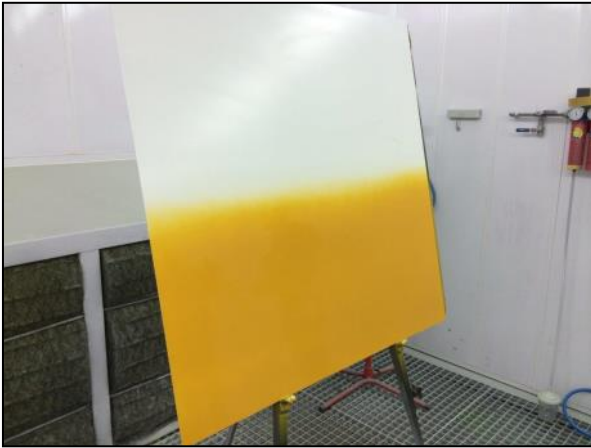
Make sure that the object stands free and is approachable from all sides. You should be able to walk around, or turn, the object since you cannot stop moving while spraying.



Spraying Rules

- Right before spraying clean the surface with tissue paper moistened with isopropyl 99% or methylated spirits.
- Test the spray first, do not spray on object without first ensuring the spray is working correctly. Preferably test it on your test pieces.
- Spray with a back-light so you can see how much material is being sprayed and what the finish of the surface is like.
- Spray according to diagram to the left.
- We recommend keeping the spray distance as around 20cm, with the spray radius set to wide and the spray gun kept at 90 degrees of the object from start to end.
- Actively spray in one fluent motion, keeping the spray gun trigger held down until the object is completely covered. Walk around, or turn the object as necessary and do not stop spraying until the surface is completely coated.
- Try to spray a thin layer, taking care not to let it get too thick.
- If necessary, use two sprayers when working with very large objects.





Post-spraying

It is very important to observe the Instacoll Base layer as it begins to dry. Stay with the object and watch it carefully after spraying. Ask yourself 'how is the layer developing?', 'is it flowing nicely?'. If craters, pin holes or orange peel start to form then allow the Instacoll Base to dry for a minute. Then, use a short, fast burst from the pistol to blow some more air and Instacoll onto the surface. This will break through the surface tension in the film and there's a good chance the irregularities disappear.

If sags or runs start to form then you can try and fix this by changing the position of the object.

If you are not satisfied with the work then immediate spray off the Instacoll Base with a waterjet. You have around 10 minutes after spraying to do this. After 10 minutes the Instacoll Base will require ethanol to

remove the Instacoll Base and it can be time and labour intensive to remove the Instacoll Base.



Drying

Once properly applied, the normal Instacoll Base and Instacoll HA will dry to a high-gloss finish. This gloss finish is the appearance you will see in the gold leaf after it is laid. Instacoll Base matt will dry to an eggshell finish.

If using Instacoll Base or Instacoll Base Matt then leave the surface to dry for at least 24 hours. If working with Instacoll Base HA you will have to leave the surface at least 48 hours longer to dry, possibly even longer. These drying times are longer than brush applications as a thicker layer of Instacoll Base is built up by spraying and takes longer to dry.

Applying Activator

Ensure the Instacoll Base is completely dry before application of Instacoll Activator. If the surface was prepared using Instacoll Base High Gloss or Instacoll Base Matte then apply Instacoll Activator. If Instacoll Base HA was used then you will need to use Instacoll Activator HA.

Using a clean cotton rag wipe the Activator thinly and evenly over the surface. When applying Activator, it is good practice to activate only the amount of the base that you can realistically gild over in 60 minutes. After 60 minutes the adhesion of the activated surfaces drops and the leaves will not stick as well. After this working time, you will need to keep reactivating the surface to keep gilding. You can reactivate ungilded Instacoll Base repeatedly and can even leave it dry for up to six months before activating again. It is good practice to finish the job in as short a timeframe as possible though, as leaving the Instacoll Base too long can make it more difficult for the leaf to adhere.

After application of Instacoll Activator or Instacoll Activator HA, the surface should be ready to receive the leaf in 5-10 minutes. Please note, you should only apply leaf to the surface after the activator is dry.





Applying the Leaf

To apply the leaf first press the transfer leaf down onto the surface, with the gold side down, and then press the tissue backing paper with the Instacoll Tissue. This will release the leaf from the tissue and stick it to the Instacoll Base or dried, activated Base. Once this is done you can remove the tissue paper and then, using the Instacoll Tissue, gently press down directly onto the gold leaf to help fully adhere it. When working on relief detail or intricate surfaces we recommend using an Instacoll tool instead of the Instacoll tissue to help push the gold into the recessed areas. As with any other gilding we recommend overlapping the gold leaf when laying it, to ensure minimal joins.

During the laying process, it is possible to eliminate any overlap lines in the gold leaf by pressing the Instacoll Cloth onto the seam and, while using gentle pressure, turning the cloth in circular motions along the line of the join. Take care not touch any activated Instacoll Base Size that has not had gold applied as this will contaminate the base size and affect the appearance of the leaf.

Once all the leaf has been laid press down on the complete surface again with an Instacoll Tissue, then rub the surface gently with the Instacoll Tissue in a single direction to get a high-gloss gilded finish.

Faults in the leaf can be filled by using the above method or alternatively you can use loose leaf. The loose leaf method is slightly different. The first step is to apply Instacoll Activator thinly to areas that need to be patched in. Then the loose leaf is laid onto the wet activator and allowed to settle. After the surface has dried sufficiently the leaf should be pressed gently using an Instacoll Tissue. This finish is not as brilliant as you would get following the process outlined above but it can be applied weeks or months later if the surface needs to be repaired.



Pictured—Instacoll Tissue. This soft cloth is an integral part of the Instacoll System and is key in obtaining a brilliant shine.



Pictured—Instacoll Tool. The soft rubber ends of the Tool are designed to press leaf into crevices of surfaces treated with Instacoll System.

