

# deffner & Johann

Supplies for RESTORATION | CONSERVATION | ART HANDLING – SINCE 1880

## TECHNICAL DATA SHEET

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## **High performance Interior and Exterior Gilding with the Kölner Instacoll gilding system**

The system exists of two components:

1. Instacoll Base/ HA-System yellow and clear 2. Instacoll Activator/ HA Activator (available in (100 ml · 500 ml · 1 l · 4 l))

### **Method**

The Instacoll system is a way of high performance gilding. The system is fully tested and meets the requirements of long-lasting exterior gilding. Since 1990, the Instacoll system has been used on several famous monuments with long-lasting results. The perfect adherence is achieved in two steps. Firstly the surface is treated by a base and secondly the adherence activating Activator is applied.

### **Surface**

The surfaces must be cured, dry and free from dust and grease. Surfaces must be machined in such way that they are also weather-resistant without gilding. When gilding on metal surfaces the surface must be preprocessed with primer and two layers of high gloss finish (advice: color RAL 1001). These layers must be dried completely. The last layer needs to be scuffed with Scotch Brite scuff pads. The primer and the high gloss finishing works as isolation layer to prevent contact corrosion. (Caution: Never apply Instacoll Base on powder coating use always first a primer).

### **Application of Instacoll Base with brushes**

·Instacoll Base must be applied evenly with synthetic fiber (Toray) brushes. Instacoll base can be thinned with water. The product doesn't need to be thinned at temperatures between 15 °C and 25 °C.

Between 5 °C and 15 °C the product must be thinned slightly. The product must not be used at temperatures below 5 °C. At temperatures higher than 25 °C only small surfaces can be finished. Apply Instacoll Base generously. When the product is not applied generously enough, visible brush marks may remain. After the first layer is dried, a second layer can be applied in order to improve the equality of the surface. The danger of wrinkling after gilding increases when the layer is applied too thick in one time.

### **Application of Instacoll Base by spraying (low pressure)**

Set the product on a viscosity between 20 and 28 seconds (Din-cup 4) at 20 ° C. (The product must not be used below 5 °C). This is equal to thinning with water between 5 and 10 %. In general a spray aperture of 1 to 1½ mm is to be used. The drying time will be extended as the sprayed layer is usually thicker than the layer that is applied by using a brush. Optionally test with a tissue paper (see drying time). There is a special spraying instruction leaflet available

## **Drying time**

At a temperature of about 20 °C the drying time is minimum 1 h but 3 h are suggested. The drying time must be extended in conditions of low temperatures and high humidity. The drying of the layer can be tested as follows: Take a tissue paper from a gold leaf booklet and firmly press this on the layer. If the layer is dry enough the tissue paper won't stick.

## **Application of Instacoll Activator and gold leaves**

When the Instacoll Base layer is dried, the Instacoll Activator can be applied. The application of the Activator can be applied at any time, even months later. Use for the application an tissue that is drenched in Instacoll Activator of a brush.

Apply a very thin coat of Instacoll Activator on a size of surface which can be covered with gold leaves within 60 minutes. (Please note: after 60 minutes the adherence decreases and the likelihood of gold leaves to adhere less superbly will increase.) Instacoll Activator dries in about 5 to 10 minutes. As soon as the Instacoll Activator layer is dried, the Instacoll Base layer will be activated with superbly adherence for gold and silver leaves to achieve high gloss gilding. Firmly press the gold leaves down with an Instacoll Tissue. For working on surfaces with reliefs, the handy Instacoll Tool can be used. This tool allows to push the gold leaves into deepenings. Leaves are to be applied overlapping so that whole surface is covered. During the processing time the edges of the leaves can be fit into each other by polishing the surface with a soft tissue under gently pressure and rotating movements. All applied gold leaves must be pressed down and be burnished. Surfaces that are activated with the Instacoll Activator but not covered with gold leaves must not be touched because the adherence will decrease when touching. (Tip: use the special Instacoll Tissues.) Agate burnishing is not possible.

## **\*Weather-resistance**

With gold leaves gilded surfaces can immediately be exposed to mild meteorological effects (dry and not too cold). Adverse weather conditions as such as low temperatures with rain, snow or hail will extend the drying time (several days, depending on the conditions). In the course of time the gloss level will fade but remain on higher level and always will be shinier than the traditional oil mixture gilding.

## **Kölner Instacoll gilding system MATT (interior use only)**

Works the same way as Instacoll for high gloss gilding. The yellow matt version is darker than the yellow gloss version so that it is always visible which gilding will become matt or glossy. Instacoll Base Matt and Instacoll Base Glossy can possibly be mixed. The following procedure may be used: Apply Instacoll Base Matt on the surface that shall be gilded. Let the layer dry for a minimum of 3h, mask some parts (e.g. a braid), apply Instacoll Base Glossy to the remaining parts and let them dry. Hereafter activate the surface and gild. High gloss and matt effects will occur automatically. The technique can be used vice versa, starting with Instacoll Base Glossy and applying Instacoll Base Matt in a second step.

We advise to use Instacoll Matt finishing gilding only for interiors as matt finishing is known for attracting dirt.

## Kölner Instacoll gilding system HA (high active)

Instacoll HA has a slightly better adherence and is especially developed for metal leaves that are thicker than the standard gold leaves. Instacoll HA is especially developed for gold leaves with a quality of more than 20g. (8x8cm). Instacoll HA Grey is especially developed for the processing of Silver and Palladium leaves. The processing with Instacoll HA is the same as processing with normal Instacoll with the exception of an extended drying time. Instacoll Base HA must dry a minimum of 48h before it can be activated with the Instacoll Activator HA.

## Those who are used to gild with oilmixture should pay attention to the following

### when working with Instacoll:

Mixtion	Instacoll
<ul style="list-style-type: none"><li>· Application after 3 – 12 or 24h.</li></ul>	<ul style="list-style-type: none"><li>· Apply Instacoll Base yellow or clear.</li><li>· Let Instacoll dry completely (1-2h- HA 24h).</li><li>· Apply the activator with a cloth or brush and let it dry (5-10 min).</li></ul>
<ul style="list-style-type: none"><li>· Firmly press down the gold leaves.</li></ul>	<ul style="list-style-type: none"><li>· Firmly press down the gold leaves and rub with a cloth over the transfer paper.</li></ul>
<ul style="list-style-type: none"><li>· Immediately peels off the transfer paper.</li><li>· Firmly press down the gold leaves with a gilders mop</li></ul>	<ul style="list-style-type: none"><li>· Peel off the transfer paper, press down the gold leaves with the Instacoll Tissue once more and brush off the redundant gold. Burnish the gold with an Instacoll Tissue.</li></ul>
<ul style="list-style-type: none"><li>· Application time is limited.</li></ul>	<ul style="list-style-type: none"><li>· Application time is unlimited.</li><li>· When the applicator is dried the gold leaves can be applied for about 1-2h. If the adherence decreases, the Activator can be applied again. After the drying time the application of gold leaves can be continued.</li></ul>
<ul style="list-style-type: none"><li>· Drying time of several weeks to achieve weather-resistance.</li></ul>	<ul style="list-style-type: none"><li>· The gilded product can immediately be exposed to not too extreme weather conditions. (*see weather-resistance)</li></ul>

**Tips:**

- Instacoll Base can be used for signwriting without Activator. Let the surface dry after the application of Instacoll for about one hour. Then you will have about one hour for gilding.
- Use a synthetic fiber brush (Toray fiber).
- Use an adequate cloth for pressing down the gold leaves, e.g. the special Instacoll Tissue.
- The activation can be done after 1-2 hours but also after 1 day, 1 week, 1 month or even after a year. This is why Instacoll Base should be applied to the complete surface. On large surfaces Instacoll can be sprayed.  
(all drying and processing times are base on temperatures between 15-20°C and a humidity of 50-80%)