

## SELF-ADHESIVE MATERIALS: APPLICATION TO WINDOWS

### Introduction

Ritrama offers several solutions in case of application to windows. The application of a self-adhesive films on glass has to be done in the best possible manner: this will ensure the product will perform as expected of a self-adhesive. The decals are normally wet applied even if there are cases where is possible to apply with dry method.

Ritrama films can be applied on a wide range of substrates, provided they are clean, dry, smooth, non-porous and free from polluting agents like grease, dust, silicone, etc. That is why cleaning the substrates carefully is key to reach the optimum adhesion level.

### Cleaning & Substrate Preparation

The entire substrate surface has to be thoroughly cleaned before applying the self-adhesive material, even if it may look clean. Do not forget to apply the graphics immediately after cleaning the substrate.

- Clean the substrate with soapy water but avoid soaps or preparations that contain waxes, oils or lotions.
- Rinse with clean water (do not leave any traces of soap on the surface).
- Clean away any grease using isopropyl alcohol\* or denatured petrol.
- Dry the surface using a dry cloth or a clean paper towel, which will not leave any residue, make sure the isopropyl alcohol or denatured petrol evaporate.
- Make sure the substrate is completely dry. If necessary, use a heat gun to dry any retained liquid. It is possible that heat gun helps also when the glass is cold in a winter period.
- Pay attention to the outside temperature: it should be between 15°C (59°F) and 25°C (77°F).
- For the decoration on a transparent surface, you need a squeegee in silicon or soft plastics, the same used to clean the glass, a cutter, a remover of silicon (often on the sides of the window there are parts of clear silicon remaining of the installation of the window) and a cleaning cloth.

*\* if you are using industrial grade IPA, mix 1 part of IPA with 2 parts of water. If you are using rubbing alcohol (90°), do not dilute it. For some substrates like latex paint, oil-based paint, ABS, Plexiglas, fiberglass, polystyrene, it is not recommended to use IPA.*

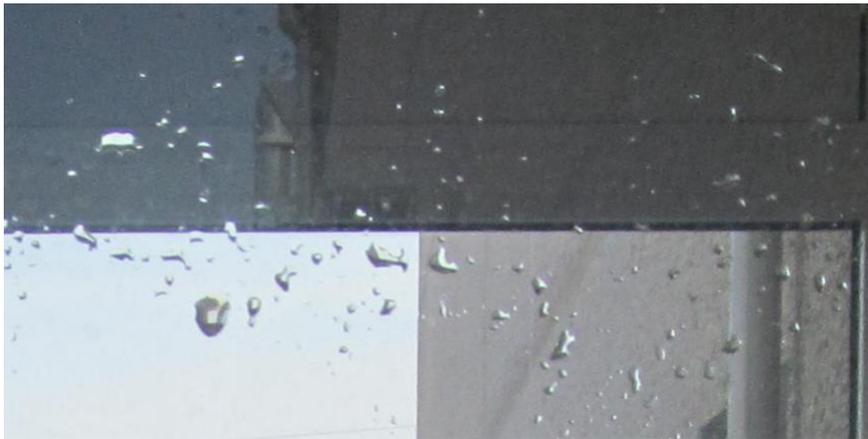
*If you are using other cleaning solvents, be aware that some window cleaners contain waxes. Be also aware that automated vehicle washing equipment could use chemicals which may interfere with adhesion. Always test specific cleaners in an inconspicuous area before use and refer to the manufacturer recommendations.*

## Wet Application

Wet application involves the use of water between the self-adhesive film and the substrate to decorate. This method permits the decorator to slide or modify the position of the decoration thanks to the bearing of water between the adhesive and the surface.

The glass has to be precleaned; it is suggested to use a very quick evaporating material such as ethylic alcohol or suitable liquid degreaser.

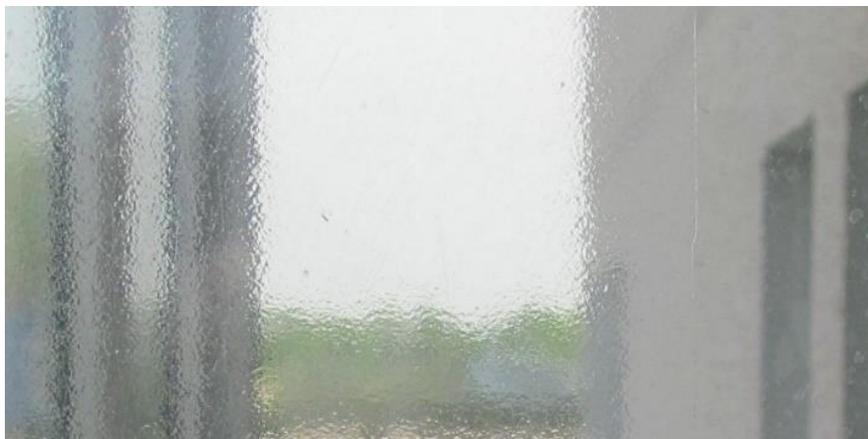
Wet the surface with enough water to allow the film to slide during application.



In case of high temperature condition, in order to slow down the evaporation, it is possible to add few millilitres (3-5 in one litre of water) of a liquid such as a window cleaner.

At this stage apply the self-adhesive material on the wet surface; once the material is correctly in place, gently remove the water below using a spatula, starting from the centre and moving to the external areas. Once this operation is completed, only a thin layer of water will be present between the self-adhesive material and the glass.

It is recommended to allow between 24/48 hours from the application for the complete evaporation of this water trapped behind the self-adhesive film. The final results will look as follows.



The Wet Application is recommended for decorations with a large self-adhesive pieces and decals and for indoor application.

Always test specific cleaners in an inconspicuous area before use, refer to the manufacturer recommendations.

## Dry Application

In case of self-adhesive with structured coating such as the Airflow system, it is possible to apply the PVC without water.

If use a standard product with a glue flat pay attention to the decoration, before starting the job, make sure to have all the references ready when you touch the substrate with the film. It is important not to touch the adhesive because it is easy to leave fingerprints.

Use the Application Tape and press the self-adhesive only when you have find the right position.

Start to use the squeegee from the middle, with a movement from left to right, from top, and to bottom.

**Attention**, when decorating windows with dark colours do not cover more than the 75% of the surface, unless the glass is tempered.

In case of doubt, ask for further information:

<https://www.ritrama.com/en/contacts/#information-request>

### IMPORTANT

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*The methods of conversion and application of Ritrama's self-adhesive materials are multiple and it is therefore essential that the users are aware of the particular method to be used, prior to commencing the production.*

*Printing: Testing for compatibility between product, printers and inks is always highly recommended before printing the product.*

*Application Systems and Conditions: it is recommended that the performance of the product be always tested in the actual applications conditions as substrate state (rough, smooth, flat or irregular shapes, moderate curves, with or without rivets); applicator technology (hand application or fully automated lines); specific stress on Ritrama material once applied (high and/or low temperature, mechanical stress, exposure to challenging environment conditions), et cetera.*

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