

Membrane Cabinet Door Production Process

Step by step, from adhesive application
to PVC or PET foil coating

This guide explains adhesive application, waiting and drying, placement on support blocks and foil coating.

A clearer process, more efficient production.



PRODUCTION PROCESS

4 KEY STAGES



Adhesive Application

Apply adhesive evenly to the surface.



Waiting and Drying

Allow the adhesive to dry under suitable conditions.



Placement on Support Blocks

Position the cabinet doors correctly on support blocks.



PVC / PET Foil Coating

Heat the foil and apply it under vacuum.

CABINET DOORS / STEP 1 / 4

Adhesive Application

Applying adhesive evenly to the cabinet door surfaces is a critical stage for durability, long service life and strong bonding performance.



1 Adhesive Application Area

Where facilities permit, a separate, ventilated adhesive application area provides a more organised, clean and controlled working environment.

2 Workplace Safety

The operator should wear a mask, and the area should be adequately ventilated to protect employee health.

3 Adhesive Quality

Adhesive quality directly affects coating quality. Select an adhesive that is suitable for the product and application conditions.

4 Spray Gun and Nozzle Selection

Nozzles in the 1.4–1.8 mm range are generally preferred. Ask the supplier for the most suitable size for the adhesive being used.

5 Correct Application

Apply the adhesive evenly to the surface, machined profiles and edges.

6 Excessive Adhesive Application

Excess adhesive creates a layer on the surface. This layer can become visible after foil coating and reduce the quality of the finish.

7 Insufficient Adhesive Application

Insufficient adhesive reduces bonding performance and can shorten the service life of the coating.

8 Surface Inspection and Cleaning

Keep surfaces clean. Correct tool marks, CNC waviness, design errors and similar defects first. Check again after the adhesive dries. Lightly hand-sand any build-up or roughness, then clean with air.

9 Second Coat (Optional)

Where necessary, and if suitable for the adhesive system being used, a second coat may be applied after the first has dried.

CABINET DOORS / STEP 2 / 4

Waiting and Drying After Adhesive Application

After adhesive application, cabinet doors are left to dry under suitable ambient conditions. Drying time can vary with ambient temperature, air circulation and the adhesive system used.

**30–45 minutes**

An approximate drying range often considered in practice.

Time may vary with ambient conditions and the adhesive system.



1. Drying Time

Allow sufficient time for the adhesive to settle properly on the surface. The time may vary with ambient temperature and the adhesive system used.



2. Drying Racks

Arrange the cabinet doors neatly on racks. Keeping the parts from touching each other helps protect the surface quality.



3. Workspace Planning

Allow for operator access, foil unwinding space and loading clearances. Position racks far enough away to avoid obstructing the workflow.



4. Surface Inspection

Inspect the cabinet door surfaces after drying. There should be no build-up, roughness or unwanted marks on the surface.



5. Final Preparation

Check the cabinet doors one last time before loading the machine. If necessary, lightly sand by hand and clean with air.



6. Next Stage

Once dry, the cabinet doors are placed on support blocks in preparation for PVC or PET foil coating.

CABINET DOORS / STEP 3 / 4

Placement on Support Blocks

After drying and final surface inspection, place the cabinet doors on support blocks on the worktable with suitable spacing. This arrangement helps the foil wrap the part more effectively, especially around the edges.

**80 × 150 mm****Height: 28 mm**

1. Support Block Size

Support blocks measuring 80 × 150 mm and 28 mm high are generally preferred in practice.



2. Blocks for Edge Wrapping

Cabinet doors that require edge wrapping should be raised on support blocks. This allows the PVC or PET foil to wrap around the edges more easily.



3. Spacing Between Parts

For applications with edge wrapping, a gap of 40–75 mm is ideally recommended. The distance may vary with foil thickness and the panel design.



4. No Edge Coating

Support blocks are not required when the edges are not being coated. Parts can be placed directly on the flat worktable.



5. Minimum Clearance

A gap of approximately 10 mm is often sufficient for applications without edge wrapping.



6. Balanced Placement

Arrange the parts evenly and neatly to avoid unnecessary empty space on the table and help minimise PVC foil waste.

CABINET DOORS / STEP 4 / 4

PVC or PET Foil Unwinding, Heating and Vacuum Pressing

Lay PVC or PET foil evenly over the cabinet doors and pull it across the frame. Move the heating unit into position to heat the foil in a controlled manner.

The correct temperature, duration and controlled holding time directly affect coating quality and product life.

**Delta PLC touchscreen**

Temperature and vacuum parameters can be monitored using manual or automatic control.

**1. Foil Unwinding**

Lay PVC or PET foil evenly across the worktable without wrinkles.

**2. Initial Setup: Manual Mode**

For the initial applications, use manual operation to observe the temperature at which the foil expands sufficiently. These values can then be entered into the automatic settings for automatic pressing.

**3. Correct Heat**

As the foil heats, it initially forms waves. Once the surface is smooth and stable, it is ready for vacuum pressing.

**4. Preheating**

On cold days, at the start of production, the empty worktable and heating unit may be preheated for approximately 30–60 seconds.

**5. Vacuum Pressing and Holding**

The heat may be switched off after vacuum pressing. Keeping the products inside for approximately 30–45 seconds can support better bonding.

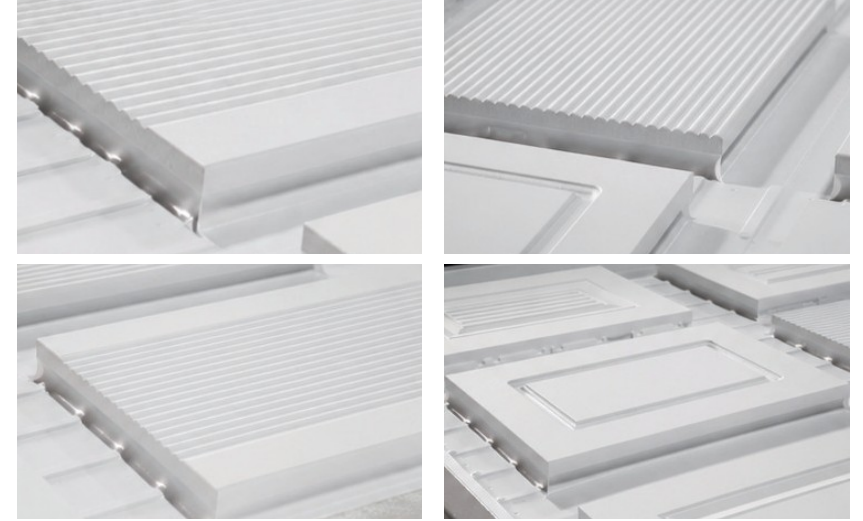
**6. Points to Watch**

Excessive heat can cause burning or deformation, particularly in thin foils. Applying vacuum too early may reduce the durability of the bond.

CABINET DOORS / RESULTS AND QUALITY

Final Result and Surface Quality

The correct adhesive, surface preparation, controlled drying, suitable placement and correct heat and vacuum settings work together to achieve high surface quality. The result is a smooth, uniform and attractive finish.



1. Smooth Surface

The correct process produces a uniform, clean and attractive surface finish.



2. Correct Edge Wrapping

Suitable preparation and settings provide consistent, strong coating around the edges.



3. Clear Profile Details

The design and pattern details remain clearly defined after coating.



4. Strong Bonding Performance

The correct adhesive and heat management contribute to a long-lasting bond.



5. Clean Workmanship

Surface preparation and controlled application are important for a flawless final appearance.



6. Quality Finished Product

Correct management of every stage delivers quality results that support customer satisfaction.