

APPLICATION GUIDE FOR HEAT TRANSFER COATING PROCESS

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GENERAL

This document provides guidelines for the factory application of Max **PV series** for the wood finish effect using sublimation process. Our **PV series** powder coatings are exterior durable powder coatings designed as a base coat for sublimation or heat transfer decoration technique to meet the stringent requirements of the construction industry.

SURFACE PRE-TREATMENT

Components or objects must be carefully handled. Avoid contamination with dust, oil, fat, finger marks, etc. Care should be taken to secure a proper treatment of the total area. Recommended pre-treatment process:

a) Degreasing / etching – alkaline or acidic. Etching degree must be ≥ 1 g/m². And ≥ 2 g/m² if the coated component is exposed to sea climate area. → b) Rinse → c) Acid wash → d) Rinse → e) Chromating → f) Rinse

DRYING

Pre-treated surface or components should be dried in an oven. Maximum object temperatures in the drying oven must not exceed 100°C.

BASE COAT APPLICATION

A single coat application should be undertaken in one operation, to a film thickness of 80 – 100 microns for exposed areas. Wider film thickness variation can lead to pronounced color difference in the final color of the coated profiles. The coating thickness should not exceed 100 microns if the coated aluminum component is to be treated mechanically after coating (i.e. sawing, milling, drilling, etc.).

CURING OF BASE COAT

It is important to a fully cured base coat to ensure an easy removal of the film after the sublimation process. Refer to the relevant technical datasheet of the base coat.

STORAGE AND HANDLING OF BASE COATED COMPONENTS

Base coated components should be unloaded and transferred to a clean rack or other similar container. Components should be allowed to cool down prior to the application of the film. Base coated components should never be dropped or collide with any hard surface to prevent damage to the base coating. Base coated components should be decorated with a suitable film within 12 hours. Otherwise, base coated components should be properly stored in a cool, dry place and should be covered with a clean plastic sheet. To avoid deterioration of the base coat components, maximum storage of base coated components should be < 72 hours.

APPLICATION OF THE SUBLIMATION PAPER

1/ Surface checking: The presence of impurity on the profile surface (dust, grains, aluminum chips) prior and during sublimation process leads to permanent faults on the quality of wood finish. (Necessary masking tapes can be proceeded prior to the application of sublimation film)

2/ Prepare Sublimation Paper: Depending on the size of the coated component, the size of the film is pre-determined.

3/ Prepare Liquid glue: Liquid glue can be pre-mixed from adding Powder glue in a certain volume of warm water, normally the ratio is 1:5.

4/ Spread a thin layer of liquid glue on the coated component, adhere sublimation paper on the glue spread surface (Paper side with pattern touching down), make sure the sublimation paper contact to the base coated component (using a thin plastic blade to pull out air and bubbles between paper and base coat)

SUBLIMATION

In order to get a proper ink penetration, the metal temperature on the profile must not be below 160°C and not exceed 170°C within 5 minutes) (see the relevant Product Data Sheet). Final color of the wood finish can vary if the curing temperature (as recommended by film supplier) is not achieved.

PAPER PEEL-OFF AND PACKING UP

Once the coated components are out of the curing oven and cooled down, start peeling off the sublimation paper. (Coated components should be cooled to below 40°C). Final inspection before packaging.

To prevent any damage during transportation, each coated object or component should be packed individually and isolated from other objects or components by a Kraft paper, plastic sheet, foam pad or any other equivalent that serves the purpose

NOTE: The information herein is currently believed to be accurate. We do not guarantee its accuracy. Purchasers shall review statements on specific products and/or should make their own investigations to determine if such products are suitable for a particular use.