FRAMEPORT®
MANUFACTURERS OF QUALITY DOORS

Ref. Lacquering & Staining door ends.UV.PLUV.2238.
Ref. WHITE pine doors – Lacquering Process.

Caçador (SC), Brazil, January 15th, 2013

Description of the painting methods actually used at FRAMEPORT factory, which are divided in two important groups:

I – For all 1 3/8" and 1 ¾" DOOR ENDS protection.
II – For all white painted FRAMEPORT doors.

I – LACQUERING & STAINING the 1 3/8" and 1 ¾" DOOR ENDS with UV.PLUV.2238:

Information and Composition on Ingredients **used to insulate door ends** (two coats) for additional protection, covering the areas that usually are not painted or insulated at consumer job site:

Ready to be used product.

Chemical nature: UV ACTIVATED polyacrylic two coats varnish.
Ingredients or impurities contributing to hazard:

CHEMICAL NAME	CAS NR	NR Range of concentration (%)	Symbol	Frases R
Butyl ester of acetic acid	123-86-4	1.73 - 2.88	F	R11 ; R66 ; R67
UV Activator	7473-98-5	1.88 - 3.13	Xn ; N	R22 ; R50/53
Reactive monomer	15625-89-5	24.75 - 41.25	Xi ; N	R36/37/38;R43;R51/53
Boiling oil	64742-95-6	0.13 - 0.22	F;Xn;N	R11 ; R65 ; R67
Epoxy resin	N.d.	16.50 - 27.50	N.d.	N.d.
Polyester resin	N.d.	19.50 - 32.50	N.d.	N.d.
Aluminum silicate	1335-30-4	6.75 - 11.25	N.d.	N.d.
Xylene	1330-20-7	2.03 - 3.38	Xn	R11 ; R20/21 ; R38
Zinc stearate	557-05-1	1.13 - 1.88	N.d.	N.d.

Classification system: Ingredients have been classified according to the Policy 67/548/EEC.

II – WHITE painted FRAMEPORT doors:

II a) – RAW MATERIAL used as a substrate for all FRAMEPORT WHITE PAINTED doors.

The main assumption for all types of painting is:

BEFORE WE START, WE NEED TO KNOW VERY WELL HOW WILL THE SUBSTRATE REACTS UNDER THE ACTION OF A SPECIFIC TYPE OF PAINT WE WANT TO SPRAY ON. So, here is the information on the substrate used for all FRAMEPORT doors:

- PINE WOOD, kiln dried down to 8% moisture content.
- PINE TREE SPECIES: ***Two main wood species growing in Brazil (fast growing tree – adult tree is circa 25 years old – originated from North America), are used. Technical comments on respective species as follows:***

1. Scientific name: PINUS TAEDA. Popular name in USA: LOBLOLLY PINE.

Loblolly Pine needles are in clusters of 3, slender, stiff, 6-9 inches long, pale green and deciduous during the third season. The oblong cones are 2-6 inches long, light reddish-brown, and armed with a spine at the tip of each scale. Cones drop their seeds in autumn and winter, remaining on the tree for another year. The bark of Loblolly Pine is thick, bright reddish-brown, and divided by shallow fissures into broad, flat-topped plates covered with thin scales. The tree often reaches 100 feet in height on a good site, with trunk diameter of 2-3 feet. It has a tall, straight trunk. The short thick branches are much divided, the lower ones on older trees drooping while the upper ones grow upward. The crown is usually compact and round-topped. Loblolly is considered the principal commercial pine species of the southeastern states because of its wide range, abundance and adaptability to a variety of sites. It is often called "old field Pine" because it seeds into openings very readily. Loblolly seeds are eaten by wild turkeys, squirrels and some songbirds. Scientific name of the Loblolly Pine is "Pinus Taeda".

2. Scientific name: PINUS ELLIOTTII. Popular name in USA: SLASH PINE

Slash Pine is one of the most important Pines of southeastern United States and one of the two species yielding commercial quantities of naval stores. The common name comes from the turpentine face, of "slash" cut into the bark to collect the resinous sap. Needles of Slash Pine are dark green and lustrous, 8-12 inches long, and grow in 2-leaved or 3-leaved clusters. The short-stalked cones are 3-6 inches long, pendant, ovoid, and have thin, flat, flexible scales, each tipped with a small spine. The bark is gray to reddish-brown, rough, separating on the surface into large, thin scales. The tree commonly grows to 100 feet in height with a tall, straight, tapering trunk 2-3 feet in diameter. The stout horizontal branches form a handsome round-topped crown. The wood is heavy and hard, strong, durable and stiff. Sees are eaten by wild turkey, squirrels and some songbirds. Typical Slash Pine has the scientific name of "Pinus Elliottii, var. Elliottii". Another variety grows from Central Florida south to the lower Florida Keys and its name is "Pinus Elliottii, va. Densa".

- **F.S.C. CERTIFICATION:**

1. **FRAME MADEIRAS ESPECIAIS LTDA.** – Trademark “FRAMEPORT”

   F.S.C. SmartWood Certification # SW-COC-000360 – Manufacturers

2. **JULIANA FLORESTAL LTDA. (Associated Company Supplying all logs):**

   F.S.C. SmartWood Certification # SW-FM/COC-000130 – Forest Plantation

II b) – LACQUERING PROCESS (White Polyurethane Finishing Basecoat).

Lacquering Process adopted at FRAMEPORT factory was divided into three main groups:

- **WHITE SEALED DOORS;**
- **WHITE PRIMED DOORS;**
- **WHITE FINISHED DOORS.**

- **WHITE POLYURETHANE COMPOUND:**

Technical Characteristics:

Viscosity 25+/-2 sec. Ford 8 at 25º C.
Solids 69,04 +/- 2%
Composition: Modified alkyd polymer, nitrocellulose, aromatic hydrocarbons (except benzene), tenso-active agents, inert minerals and colorings and Polyurethane resins.

UV rays protection additive used for white finished doors only:

- **Alyphatic anti UV rays additive.**

- **WHITE SEALED DOORS:**

1. A white SEALED door is ready to accept whatever type of finishing coat (polyurethane, polyester, Water Based, etc.). It's typical look is ***"a white face cover, somehow transparent enough to recognize the underneath wood grain".*** The sealed door is factory prepared as a base to accept final coat of whatever type of colored finish which must be thick enough to hide the underneath wood grain. This process is also known as "light priming". A light mechanical and/or manual sanding before finishing process is required.
2. Process consists of spraying the wood with a white polyurethane compound mixed with hardener, dried for 2 or 3 hours before mechanical sanding.
3. Slats are usually covered by "extrusion" process.
4. Flat panels are usually covered by "roller application".
5. When Doors are white Sealed **twice** they are better known as **"primed doors"** (see next item "White Primed Doors").

- **WHITE PRIMED DOORS:**

1. Doors white Sealed **twice** are well known as **"PRIMED DOORS".**
2. A white PRIMED door is ready to accept whatever type of finishing coat (polyurethane, polyester, Water Based, etc.). It's typical look is ***"a white face cover, with basically NO transparency to recognize the underneath wood grain".*** The sealed door is factory prepared as a base to accept final coat of whatever type of colored finish which must be thick enough to hide the underneath white priming. This process is well known as "Primed Doors". A light mechanical and/or manual sanding before second coat process was already made at the factory.

- **WHITE FINISHED DOORS:**

1. Consists of a bi-component polyurethane white lacquer, composition as above;
2. **Alyphatic anti UV rays additive extra protection included,** enough to protect the white color against the Ultra Violet Rays action;
3. Lacquer is sprayed on both faces of the door at a rate of circa **90** gr/sq.meter/coat, on top of a priory sealed (one coat seal) substrate.
4. A mechanical and/or manual sanding process is required prior of finishing application.
5. 2 to 3 hours drying before piling;
6. Light “Icy white” color.

All pine White Painted and all 1 3/8” and 1 ¾” door ends protection are made in accordance with the above described manufacturing process and duly complies with normal handling and use standards.

For those White Sealed and White Primed doors, the final door finishing required to be made at job site must follow the above rules to comply with normal standard good finish requirements.