

## **INSTALLATION & APPLICATION:-**

Flexible Slate Stone Veneer is used for Wall claddings interior & exteriors. It is also used for flooring after laminating on MDF & HDF & groove cutting on special machines called readymade click flooring. Interior applications are usually on MDF, HDF, Plywood or real solid wood. It can also be installed directly on concrete or Mortar wall.

UV translucent Flexible Slate Stone Veneer is another product in this veneer which is used for internal illumination lighting in restaurants, Parks, Lamps & lampshades or back light applications.

Thin Slate Stone is Natural stone thin flexible fiber glass backed sheet that can be glued to many different indoor and outdoor surfaces. Thin Slate Stone's light weight and flexibility is appropriate for many applications such as wall paneling, Cladding on the buildings vertical and horizontal surfaces not previously considered for stone due to weight and / or flaking issues.

- Architectural
- Interior & Exterior
- Doors & Cabinets
- Furniture
- Trim & Backsplashes
- Marine & RV
- Kitchens
- Bathrooms
- Flooring
- Signage

## **COMPONENTS & BACK SUPPORT:-**

Flexible Slate Stone Veneer is a natural stone layer with fiberglass as back support. This product is manufactured in very thin flexible form with the help of support at the back in the form of Fiber glass. Apart from Fiber glass Cotton Fabric is also used for backing to manufacture stone veneer and this product has very extra flexible applications. It is also made from special glue which is different from the fiber glass backing product.

## **COLOR & TEXTURE VARIATIONS:-**

Flexible Slate Stone Veneer is made from natural slate stone; hence difference in color, texture, surface variations is bound to come in the finished product just similar to the natural stone. There are 4-5 color & texture variations in each quality of color. There are 22 colors of natural slate stone out of which this flexible stone veneer is made. Every color has 4-5 variations. While using, similar patterns & variations & colors can be packed & installed together to avoid large variation in look.

## **UV & WEATHER RESISTANCE:-**

Natural flexible slate Stone Veneer is made up of slate stone layer on the top which is a natural stone and is resistant to UV rays of the sun. It has natural inherent property against heat & cold. Flexible Slate Stone Veneer is resistant to high temperatures and sustains freezing temperatures without any effect.

## **USES ON SUBSTRATES:-**

Natural flexible slate stone veneer can be laminated to Concrete slabs, blocks & walls directly for exteriors applications. It is laminated to solid wood, Plywood, Styrofoam boards for interior applications. In all wood applications like wall panels, Kitchen cabinet, flooring natural flexible stone veneer is used with MDF, HDF boards. UV lighting applications are done usually on Acrylic transparent sheets.

## **DRY & WET CUTTING:-**

Natural flexible slate stone veneer is very easy to cut with any normal scissors for domestic applications. Where large volume of sheets is to be cut with wet diamond marble cutting blades can be used with electric hand tools or machines. This material can also be cut with tungsten carbide wood cutting blades also. Wood panel saw blades of Diamond & tungsten carbide mixture are the most suitable cutting tools for dry cutting. Any kind of thick sharp blade can also be used for small cutting operations.

## **FLEXIBILITY:-**

Flexible Slate Stone Veneer can be bent concave & convex as per the form of the curvature. It can be easily installed in round Pillars. It can be bent or folded in the form of a roll easily. The Fiber glass & glue used gives the top stone layer enough strength that while bending also there is no crack on the stone layer. It gives the stone enough bending strength. Arches or radius bends can be done with stone veneer depending on the nature & radius of the curve. Flexible Slate Stone Veneer can be bent or flexed to a radius of 360mm along the length. The width is not recommended for bending. Due to the nature of the different thickness of the individual items, the degree of radius varies per item. Fabric backing sheets are more suitable for such kind of installations including edge bending operations in wood working industry.

## **LAMINATION OR APPLICATION:-**

Flexible Slate Stone Veneer can be adhered or glued to various surfaces or substrates with PU (Polyurethane) glue. This adhesive can be used to glue the sheets to any substrate except plastic, HDPE or Acrylic sheets. These sheets can be glued to stone veneer with the help of Epoxy based adhesive. PVA adhesives are the cheapest alternative for wood substrates. D-3 & D4 PVA glues are readily available in the market.

## **PRESSURE APPALICATION:-**

Stone-Veneer has a natural, rough splittable surface with a tolerance of up to 2 mm. Thickness equalizing additions protect the veneers from being damaged. Proven are 7 mm thick rubber plates with a shore grade of 50 and a temperature Resistance of at least + 80° C. It is important that the rubber matte has an insulating effect, so that the press time can be therefore extended. Pending on the adhesive type and press temperature of 80° C, press time approximately 6 minutes. Depending on the press configuration, the pressure has to be carefully set.

## **Adhesives Recommended:**

- Dual component Epoxy Resins
- Polyurethane anywhere to any where adhesives
- Polyurethane wood (foaming & Non foaming adhesives)
- Epoxy based cementious construction grade adhesives
- Silicone adhesive

**Note:** Wet applications for shower and bathroom applications, the use of epoxy resin adhesive are the best option.

**Note:** Pressure sensitive adhesives are also recommended due to the even backing of the Flexible Slate Stone Veneer. Now Pressure sensitive glues are applied on the back of thin slate veneer and are supplied with the paper cover to use it as peel and stick material ready to use

## **BATH & SHOWER APPLICATION OR SUCH APPLICATIONS:-**

Flexible Slate Stone Veneer can be used to create a tiled effect by leaving a grout joint between cut pieces of material. Test results have shown the use of water-based epoxy grouts work well to fill between the cut veneers. By removing the material just under the grout joint, a deeper grout can be achieved if desired. Epoxy grouts are available in many colors to match or co-ordinate with the different colors of Slate Stone Veneer. Clean up of the epoxy with a sponge, the epoxy can also be used to seal and fill the Flexible Thin Slate Stone surface. It is recommended in this installation that the entire surface of the Flexible Thin Slate Stone be sealed with epoxy as a final step to ensure complete satisfaction.

## **SEALERS:-**

Flexible Slate Stone Veneer can be sealed in the similar manner as most slate and / or stone tiles are sealed. Please follow manufacturer's instructions for best results. As sealants are offered in varying degrees of luster or sheen, we recommended that you confirm the reflectance prior to complete installation to get the desired effect.

# Impregnators & Adhesives for Product Installation

## **1. POLYESTER RESIN SHEETS (NORMAL GRADE):**

Stone Veneer sheets are mainly constituted of fiberglass & polyester resin. There are three kinds of resin. Namely, normal sheet grade resin, fire retardant resin and Ultra Violet resin. The classic grade sheet material is made from normal polyester sheet grade resin.

## **2. FR RESIN SHEETS (FR GRADE):**

FR Resin sheet is made from fire retardant polyester resin. Main constituent of the sheet is resin which in this case is based on Isophthalic resin, manufactured by physical addition of halogenated additives and antimony trioxide to give excellent fire retardant properties with reference to IS 6746. This resin has the added advantage of chemical resistance to several acids and solvents etc. It is recommended for use where fire hazards are one of the main considerations besides the requirement of chemical corrosion resistance.

## **3. POLYESTER RESIN SHEETS (TRANSLUCENT UV GRADE):**

Stone Veneer sheets are mainly constituted of fiberglass & polyester resin. Sheets made from Ultra Violet resin are Translucent and is made from Ultra Violet resin.

## **4. MONO STONE VENEER:**

This material is made with cotton fabric & Ethylene Vinyl acetate copolymer Glue which is white emulsion and is water based. The final product is called Mono Stone Veneer because it is 100% eco friendly and without any solvent based glue. This is environment friendly and is very flexible as compared to normal polyester resin material.

## **5. STONE VENEER ON MDF & HDF:**

Heat Press is required to press stone veneer on MDF/HDF under 10 Tons pressure and 120 degree centigrade heat to activate the glue for 2-5 minutes for good industrial results. Glues recommended are PU hot melt glue, white water based Polymer Emulsion called Ethylene Vinyl acetate copolymer Glue. The glue can be found in the local market.