

RESIN PANEL MANUFACTURING SOLUTIONS

Consistent results in molding resin materials

Application

Arcitell® was formed in 2017 to commercialize a new technology for cladding materials to be used in the residential construction industry. The result is Qora® Cladding, a lightweight, energy efficient, fire-resistant, and easy to install product. Qora®, manufactured from a phenolic resin, has the look and feel of real stone. Heat is required to prepare the resin for mixing, to mold and cure the panels into the finished product, even to manufacture the foam cores used for insulation.

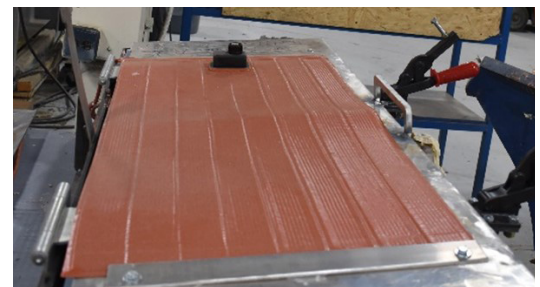
The Qora® cladding is made by placing a composite sheet in a heavy silicone mold which is profiled to appear like stone. After removing the peel ply, the foam core is pressed into the sheet. A second composite sheet is placed over top. Heat and pressure is applied to the top and bottom of the mold to form and cure the panels. Corner pieces provide unique challenges as pressure is required from more than two sides.

Solution

BriskHeat products are used for several purposes. Their manufacturing process starts with heating the resin. Drums of phenolic resin are delivered then stored in a cooler until needed. BriskHeat FGDH full coverage drum heaters are applied when the resin will be needed for production. A drum mixer is used during heating to aid in establishing a uniform material temperature. Once the resin reaches the proper viscosity, then sand and other proprietary compounds are added. Resin is poured over a layer of fiberglass reinforcement to form composite sheets which are sandwiched between peel ply and rolled for future use.

Phenolic resin is also used to make foam cores. BriskHeat SRL-ADJ silicone heating blankets with adjustable controls are used to heat the top and bottom of a clamshell designed mold for curing the foam. The bottom of the mold will provide the same contour to the foam as the finished Qora® panel. Cores add strength to the panels and the insulating properties make the cladding more energy efficient.

Arcitell® engineered a "V" shaped fixture that is heated with adjustable thermostat silicone heaters. Flat panels and corner pieces are designed to interlock, leaving it indistinguishable from real stone and mortar. After cooling, the pieces are painted and oven dried.



Industries

Composites/Epoxies/Resins
Construction
Manufacturing