Solfre 2 Case Study: American Panel

Overview
American Panel of Ocala, Fla., a family-owned company started in 1963, is one of the top 10 manufacturers of walk-in refrigerators and freezers for schools and institutions, hospitals, and restaurants. They employ about 300 people.

Challenge
Up until 2007, the company used a water-based adhesive that was ineffective because temperature changes caused the panels to swell or shrink. Because of the mixture of hot and cold air, and the mechanical force of opening and closing doors, when the sun hit the panels, they would separate from the foam insulation, causing a blistering effect.

Solution
American Panel has been using the Solfre 2 product since 2007. Solfre2 is a two-component polyurethane adhesive that offers an alternative to epoxies, one-part polyurethanes, solvented adhesives, and hot melts. In American Panel’s case, Solfre 2 is used to adhere polyurethane film to wood and metal panels as large as four feet by 20 feet, and even internal components such as door locks.

One of the advantages of Solfre 2 over other adhesives is that there is no moisture requirement for curing, therefore cure times are not affected by humidity or moisture. In addition, being solvent free, the Solfre2 system overcomes the problem of trapped solvent or moisture pockets and resulting delamination.

Other Solfre2 advantages include:

- Lower coat weights, which means less adhesive is needed in comparison to alternative products
- Much faster panel production line speeds
- Panels can be cold pressed keeping energy costs to a minimum
- No specialist storage requirements

"Without Solfre 2, we couldn't make our product as good as we'd want it to be” said Paul Ramsbottom, American Panel director of engineering. “I would say our product is 100 percent better as a result of Solfre 2 because without it, we'd have to reject every panel. It helps us maintain a consistent, quality product.”
**Solfre2 Benefits**

Chemique’s commitment to innovation and manufacturing excellence has led to the development of performance grade single and two-part polyurethane adhesives, superior to solvented and epoxy adhesives currently on the market. Solfre adhesives work in a variety of manufacturing applications where adhesives can be beaded, rolled, or sprayed.

The Solfre product line is ideal for bonding a wide range of substrates including metals, plastics, timbers, and foam. Industrial applications include: SIP panels, architectural panels, insulation panels, transportation panels, and for building panels for use in clean rooms, modular buildings, and cold storage.

**About Chemique Adhesives**

Chemique Adhesives, Inc., is a pioneer in the development of solvent-free polyurethane, water-based adhesives and adhesive application equipment. It has fast become the first-choice adhesive supplier for a diverse range of industries, including transportation, foam conversion, raised access flooring, architectural panels, portable buildings, furniture, and many others.

Chemique’s experienced chemists and engineers provide innovative solutions for customers’ adhesive and adhesive application needs. With operations across North America and Europe, Chemique specializes in the development of custom bonding solutions for customers worldwide. For more information, visit [www.chemiqueadhesives.com](http://www.chemiqueadhesives.com).