

CASE STUDY: CHANDLER CHURCH

Spray polyurethane foam (SPF) roofing is a popular choice in hot sunny environments. With R values up to R-6.5 per inch of thickness, an SPF roof can be a very effective way to insulate a building and keep utility costs low. However, SPF itself has no resistance to damage from UV rays and can be ruined in less than 5 hours of direct exposure. While many options exist for protecting SPF from UV exposure, cementitious roofing is one of the longest-lasting and toughest available. Though cementitious roofing offers many benefits, it presents significant challenges as it approaches the end of its life.



PROBLEM

As cementitious roofing ages, it tends to crack significantly and chalk, creating a surface that most coatings cannot adhere to. For this church in Chandler, AZ, tear off and replacement was not a viable option due to the multitude of HVAC units housed on the small roofing section. Disconnecting the HVAC units, even for a couple of days, would be highly disruptive to church business in the hot desert summer.

SOLUTION

Castagra's Ecodur is the only known roof coating proven to permanently bond with and rejuvenate aged cementitious roofing surfaces. Made of sustainably sourced castor oil and gypsum, Ecodur is a unique coating with extreme adhesion, even bonding to some of the most difficult surfaces. It readily accepts all reflective topcoats and creates a very tough, seamless, waterproof membrane.



APPLICATION RESULTS

Only minimal site preparation was required to ready the project area. The entire surface was swept and blown with all ponding areas scrubbed, and all blisters were cut out. With preparation complete, the roofers started in on detail work such as edging, penetrations, HVAC curbs, and blister filling. Because Ecodur has no maximum mil thickness, it easily fills cracks, voids, and blisters.

Ecodur was then applied to the remaining field area. Ecodur filled the many cracks and soaked in deep prior to curing.

Next, the first pass of an acrylic topcoat was applied. The topcoat will provide reflectivity in the intense desert sun and help keep the building and equipment cool.

An anti-skid additive of ground limestone was broadcast by hand into the first coat. This will provide grip in case any of the mechanical equipment needs servicing in wet weather.

Finally, the acrylic topcoat is applied for a seamless, reflective look.

With zero tenant interruption, Ecodur's extreme adhesion, strength, and permanent resistance to ponding water will have this roof leak-free and low maintenance for many years to come.