

CINCINNATI CHILDREN'S HOSPITAL Reduce Radiant Heat Gain

Children's Hospital of Cincinnati faced a looming problem regarding patient comfort. In the summer months, patients and patient families complained that the inside temperature was just a little too high. No matter how long the HVAC system ran, the temperature would not stay comfortable or constant.

Engineers started searching for the reason and found that due to the building's construction, the foam insulation lining the panels all around the hospital was failing. Through further investigation, they found that water was intruding through small leaks at the seams. This was due to the expansion and contraction of the aluminum composite panels lining the exterior of the building. This water entered the building and was absorbed by the insulation, causing its effectiveness to be drastically reduced.



The engineers then looked at their options, including re-insulating and re-paneling the entire building. This was cost-prohibitive, but they had to find a solution. Since the in-patient rooms line the exterior of the building, they were the hottest and most uncomfortable.

Engineers for the hospital contacted Mascoat to ask about WeatherBloc thermal insulating coating. Unlike reflective coatings, the ceramic-filled coating actually insulates, so it can be applied to the interior or exterior. It is also extremely effective on roof-tops as both an insulator and reflective coating.

In this case, MWB was applied to only the sidewalls to enhance the weakened foam insulation. Application took place between June and August of 2008. The application was prolonged because the hospital operates 24 hours a day and the applicators were not allowed to shut down any area. It was applied in 2 coats at 20 mils per coat for a total of 40 mils (1 mm) thickness. The engineers only asked for the coating to be applied to the sidewalls where the leaks were an issue. It was not put on the roof, against Mascoat's recommendations.

After application, engineers reported a 4°F difference in interior temperature and the HVAC system was cycling properly, much to their delight. Through a simple, inexpensive solution, Mascoat WeatherBloc allowed the hospital to keep patient rooms and interior spaces more comfortable.