

CUSTOM Flooring Prep and Tile Installation Sets Standard of Care at San Diego Hospital



Critical care was taken in the design of Jacobs Medical Center, a 500,000 square feet specialty hospital in La Jolla, California. Construction specifications for this landmark project included a full system of CUSTOM flooring preparation, waterproofing membranes, mortar and grout products on all 12 floors. This cutting edge medical center focuses on innovating complex procedures such as brain surgery and marrow transplants. To support its medical advances, the healing environment is filled with a cheering array of ceramic and glass tile precisely installed in patient bathrooms, public and staff areas, the kitchen and a welcoming cafeteria.

Flooring Preparation

Like most hospitals, Jacobs Medical Center utilized a number of floor coverings for the service needs of diverse spaces. Prior to installation of vinyl sheet goods, all floors were prepared with a CustomTech[®] calcium aluminate cement underlayment system. The Rouse Company addressed floor flatness and moisture mitigation on 330,000 square feet of concrete slabs in the corridors, laboratory and patient care areas.



Floor prep began with shotblasting, followed by a coat of CustomTech[®] TechMVC[™] Moisture Vapor and Alkalinity Barrier. TechMVC is a high-density, 100% solids epoxy that can be used on concrete measuring up to 100% R.H., 25 lbs. MVT and pH 14 to bring floors into compliance with ASTM F-710. Single-coat application effectively controls concrete moisture emission and creates an alkaline barrier between the substrate and moisture-sensitive adhered flooring materials.



Following moisture control and prior to pouring self-leveling underlayment, the surface was treated with TechPrime[™] A. This is an advanced acrylic primer that seals porous and non-porous surfaces and improves the bond of the CustomTech underlayment. After just an hour of dry time for the primer, the installation team barrel mixed and poured TechLevel[™] 150 Self-Leveling Underlayment. TechLevel 150 achieves greater than 4,300 psi compressive strength to resist point load and can be applied up to 1-1/2" inches deep in a single pour. Quick setting TechLevel 150 offers superior crack resistance and helps eliminate installation problems such as bond failure, crumbling and staining of resilient flooring.



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"TechLevel 150 is my go-to leveler if I have a choice. We definitely prefer it over any other product and use it on all of our jobs," said Josh Reed, concrete division manager at the Rouse Company. "The entire CustomTech flooring prep system is easy to use and works great. We love it!"

Tile Installation

The tile installation at Jacobs Medical Center began with surface preparation in accordance with industry standards. Wet areas, such as patient bathrooms and showers, were treated with liquid-applied RedGuard® Waterproofing and Crack Prevention Membrane, which meets the requirements of ANSI A118.10 and A118.12. RedGuard is a ready-to-use elastomeric membrane that creates an effective, continuous waterproofing barrier with outstanding adhesion to drain assemblies. A single coat of RedGuard was also applied on both floated and concrete floors in dry tiled areas to provide crack isolation up to 1/8".



Two polymer-modified, cementitious mortars from CUSTOM's established VersaBond family were used. VersaBond®-LFT Professional Large Format Tile Mortar was selected to install large format tile throughout the project. This includes 12" x 24" porcelain in patient bathrooms on all floors, plus 9" x 36" and 6" x 36" wood-look planks in the hospital cafeteria. VersaBond-LFT is a polymer-modified, non-slumping mortar that can be applied as thick as 3/4" to help prevent lippage issues common with large format tile. Kitchen quarry tile and 2" tile on shower floors were set with VersaBond® Flex Professional Thin-Set Mortar. VersaBond Flex is formulated for high bond strength and extended open time for tile adjustment.



Patient bathrooms and nurses' stations on different floors were given three color schemes with 3/4" x 3/4" glass mosaic wall tile in shades of green, blue and peach. Public restrooms received a dramatic black and white pattern with 1/2" by 1/2" ceramic mosaics. Specifications designated wall tile installation with ProLite® Premium Large Format Tile Mortar. ProLite offers non-sag performance along with excellent handling characteristics, making it an installer favorite. This versatile mortar also exceeds ANSI standards A118.4TE, A118.15TE and A118.11 for demanding installations.

"Out of all the mortars we have used over the years, our installers like CUSTOM's ProLite the best," said Gary Rodocker, superintendent at Inland Pacific Tile.



For chemical and stain resistance in a clinical environment, CEG-Lite™ 100% Solids Commercial Epoxy Grout was specified for use on all floor and wall tile. CEG-Lite is easier to spread than typical epoxy grouts, cleans up with only water and contributes towards LEED certification. It exceeds the performance requirements of ANSI A118.3 and is suitable for vertical grout joints without an additive. Movement joints were treated with CUSTOM's Commercial 100% Silicone Sealant to remain flexible and protect the assembly in accordance with TCNA Handbook detail EJ 171.

**PRODUCTS USED:**

RedGuard® Waterproofing and Crack Prevention Membrane; VersaBond®-LFT Professional Large Format Tile Mortar; VersaBond® Flex Professional Thin-Set Mortar; ProLite® Large Format Tile & Stone Mortar; CEG-Lite™ 100% Solids Commercial Epoxy Grout; Commercial 100% Silicone Sealant; TechMVC™ Moisture Vapor and Alkalinity Barrier; TechPrime™ A Acrylic Primer; TechLevel™ 150 Self-Leveling Underlayment.

LOCATION: La Jolla, CA**YEAR COMPLETED:** 2016**OWNER:** University of California San Diego Health**ARCHITECT:** Cannon Design, Los Angeles, CA**GENERAL CONTRACTOR:** Kitchell Contractors, Del Mar, CA**FLOORING PREP AND TILE CONTRACTORS:**

The Rouse Company, Rancho Dominguez, CA; Premier Tile & Marble, Gardena, CA; Inland Pacific Tile, San Bernardino, CA; work also completed by Wirtz Tile and Stone, San Diego, CA and Howards Rug Company, San Diego, CA

CUSTOM BUILDING PRODUCTS

TEAM: John Diaz, CSI, CTC, commercial architectural coordinator; Brian Swann, CTC, territory manager; Chris Vombaur, CTC, and David Stephens, CTC, regional technical services representatives

CUSTOM manufactures all of its grouts and sealants in 40 designer-inspired colors and many of them were used to match the nuanced tile palette at Jacobs Medical Center. The extensive ceramic, glass and large format porcelain tile set throughout the hospital was supplied by Daltile.

"We are very satisfied with the performance of the products and the support of the staff at CUSTOM," said Dann Salinas, senior estimator and project manager at Premier Tile & Marble. "The Technical Services team was very responsive and attentive to our needs during all phases of the project."

CUSTOM tile and flooring preparation systems were selected on the basis of rigorous product standards, unparalleled technical support and quality backed by an extended warranty. The high use, high traffic tile assemblies and flooring prep areas at Jacobs Medical Center both qualified for a 15-year installation system warranty. Two lightweight Emerald Systems™ formulas, ProLite and CEG-Lite, can earn carbon offset credits for any project where they are installed.

A project of this scope and scale called for a team with extensive expertise in hospital construction, led by architects Cannon Design and executed by general contractor Kitchell Contractors. Commercial flooring specialists the M.S. Rouse Company applied a CustomTech™ flooring preparation system. Tile contractors on the job included Premier Tile & Marble, who set the tile on floors B1, Lower Level and 1-3, and Inland Pacific Tile, installers for floors 4-10. Architectural and technical representatives from CUSTOM assisted the designers and contractors during each phase of the construction.

"Jacobs Medical Center is a showcase facility that joins the rapidly growing ranks of impressive projects specifying Custom Building Products," said John Diaz, commercial architectural coordinator with CUSTOM. Jacobs Medical Center is owned and operated by UC San Diego Health in La Jolla, California.

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