

# CUSTOM's Flooring Preparation Products Provide Long Term Security at Reagan National Airport



Ronald Reagan Washington National Airport (DCA) is located just three miles from the nation's capital. When expanding Terminal A in 2014 to accommodate increased passenger traffic, the Metropolitan Washington Airport Authority was taking no chances on a system failure. That's why a full system of CustomTech flooring preparation products was chosen for their new security screening area.

Award-winning David Allen Company originally bid the DCA surface leveling job using other products, but switched when they learned about CUSTOM's flooring preparation line. Project specifications called for 12" x 24" porcelain tile to be set over 14,000 square feet of severely uneven concrete containing high levels of moisture. Preparing such a surface for large format tile and heavy traffic translated into a challenging installation, even for such an experienced contractor.

Representatives from David Allen Company decided to travel to Custom Technical University in California to test and train on the CustomTech flooring preparation products. Impressed with the superior performance versus other products they have used over the years, the tile contractors wanted to use the CUSTOM products to ensure the success of the DCA job. With the approval of general contractor Clark Construction, David Allen Company successfully lobbied to break the spec in order to install the CUSTOM products at Reagan Airport.



Concrete surface preparation began with shotblasting by a Blastrac machine. Shotblasting is necessary in certain circumstances, such as enhancing the bond to the subfloor prior to use of a moisture barrier. TechMVC™ Moisture Vapor and Alkalinity Barrier was installed to control the high level of moisture in the slab. It was applied with a rubber squeegee and back rolled with a nap roller. TechMVC is a solvent-free, low viscosity, 100% solids epoxy formula that reduces moisture vapor transmission rates to less than three pounds. It protects the integrity of the installation by controlling moisture with a single coat and the treated subfloor can be primer-ready in as little as five hours.



Moisture mitigation was followed by application of TechPrime™ A Advanced Acrylic Multi-Surface Primer. TechPrime A prepares both porous and non-porous surfaces for the application of any CustomTech self-leveling underlayment and improves the bond to the subsurface. This solvent-free formula was roller-applied directly over the dried TechMVC. TechPrime A dries in as little as an hour to receive leveler and speed fast-track installations like airports.



Prior to pouring self-leveler, a deep fill area required placement of an aggregate. 3/8" all-purpose gravel was placed over the TechMVC and TechPrime A layers at an average depth of one inch. TechLevel™ 150 Premium Self-Leveling Underlayment was then poured with a 2-stage electric mortar pump to saturate the aggregate. This calcium aluminate-based underlayment levels floors prior to the installation of ceramic or stone tile, carpet, wood, resilient flooring and other floor coverings. Quick-setting TechLevel 150 provides superior crack resistance and over 4,000 PSI compressive strength while it helps eliminate common installation problems like crumbling. It can be poured to a depth of 1 ½ inches and seeks its own level within minutes. At Reagan Airport, the gravel was raked during the pumping of self-leveler and once completed, the elevation had been raised by 2-1/4 inches.

"We were very pleased with the performance of the CustomTech products and the personalized consultations we received from the entire team at CUSTOM," said Chris Bowers, project manager at David Allen Company. "We are not an easy group to impress, but we will be using CustomTech on our next surface preparation project."

**PRODUCTS USED:**

TechMVC™ Moisture Vapor and Alkalinity Barrier, TechPrime™ A Advanced Acrylic Multi-Surface Primer, TechLevel™ 150 Premium Self-Leveling Underlayment

**LOCATION:** Arlington, VA

**YEAR COMPLETED:** 2014

**GENERAL CONTRACTOR:**

Clark Construction Group,  
Bethesda, Maryland

**FLOORING CONTRACTOR:**

David Allen Company,  
Raleigh, NC

**CUSTOM BUILDING PRODUCTS**

**TEAM:** Bruce Burton, business development manager; Jamie Karabella, senior CustomTech products specialist

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