



CASE STUDY: PIER 1 IMPORTS

# New Pier 1 Imports Corporate Headquarters relies on clean sealant technology



DOWSIL™ 756 SMS Building Sealant was specified on the Pier 1 Corporate Headquarters building for its compatibility with stone, metal and glass substrates as well as its ability to resist staining. [Photo courtesy of CDC, Inc.]

An innovative silicone sealant formulation has been specified for the new 20-story corporate headquarters of Pier 1 Imports in downtown Ft. Worth, Texas, to help preserve the unique aesthetics of the building's stone and glass curtainwall design.

"This design has very unique visual qualities," observed Chuck Knickerbocker of CDC, Inc. (Dallas, Texas), curtainwall consultant for the Pier 1 Corporate Headquarters. "There are varying proportions of exposed stone, metal and glass in four different wall systems to create a specific effect, and it was very important to use a sealant that would be compatible with all three materials, yet be able to resist any kind of staining."

Jeff Benson at Haley Greer (Dallas, Texas), curtainwall contractor on the project, explained: "Some materials have a tendency to accumulate dirt or produce a residue rundown over time, which can be caused by the migration of free fluid to the surface of a cured sealant. We wanted to reduce any potential for aesthetic issues, but at the same time, we needed a material that was capable of withstanding the wide temperature swings from winter to summer in Texas," he said.

## The project

DOWSIL™ 756 SMS Building Sealant has been specified for the new 20-story corporate headquarters of Pier 1 Imports in downtown Ft. Worth, Texas, to help preserve the unique aesthetics of the building's stone and glass curtainwall design. Formulated specifically to avoid residue buildup and staining of glass and porous building materials, the high-performance sealant is used for weatherproofing a complex building geometry, while avoiding rundown and discoloration that could affect the striking appearance of the structure.

### City and country

Ft. Worth, Texas

### Products\*

DOWSIL™ 756 SMS Building Sealant

DOWSIL™ 790 Silicone Building Sealant

DOWSIL™ 795 Silicone Building Sealant

### Key Participants

- Dow Chemical Company, Midland, Michigan
- CDC, Inc., Dallas, Texas
- Haley Greer, Dallas, Texas
- Manhattan Construction Company, Dallas, Texas
- Thos. S. Byrne, Ft. Worth, Texas
- Baker Metals, Dallas, Texas
- Kemco, Inc., Dallas, Texas
- Silicone Specialties, Inc., Dallas, Texas

\*Prior to February 2018, products were branded as Dow Corning.

## Sealant performance

To meet these requirements, Haley Greer selected DOWSIL™ 756 SMS Building Sealant, a one-part silicone material specifically developed to avoid residue build-up and staining of glass and sensitive porous building materials. When fully cured, the medium-modulus formulation delivers excellent adhesion to glass, brick and other common substrates, and can accommodate 50% movement in a properly designed joint.



When completed, the new Pier 1 Center will employ approximately 94,440 linear feet of DOWSIL™ 756 SMS Building Sealant in joints between glass, stone and aluminum substrates. [Photo courtesy of CDC, Inc.]

Senior Project Manager Bill Saunders provided the general contractor's view for Manhattan/Byrne, a joint venture comprised of the Manhattan Construction Company (Dallas, Texas) and Thos. S. Byrne (Ft. Worth, Texas). "The weather tightness of any structure we build is a primary focal point of our quality control, especially in a complex curtainwall system like the one on the Pier 1 building," he commented.

## Project components

Unitized curtainwall panels for the Pier 1 project were designed and manufactured by Baker Metals (Dallas, Texas). "Unlike a conventional flat design, this building has some complex fenestrations that give it added dimension," said President Bob Baker. He estimated that a total of 230,000 square feet of curtainwall has been supplied for all sides of the building.

The main tower is constructed of more than 900 pre-glazed curtainwall panels and 5,364 sections of imported Italian stone, installed by Haley Greer and sealed with the silicone material by the project's Dallas waterproofing contractor, Kemco, Inc. The roof section includes an additional 448 translucent wall panels and 2,395 glass lites. In all, the completed building will employ approximately 94,440 linear feet of the DOWSIL™ brand sealant in joints between glass, stone and aluminum substrates.

The one-part silicone material is also helping contractors avoid priming in some areas. "Aluminum is used for cladding and canopies on the columns for this building," said Kemco President Mike Kemna. "The original specification called for a different silicone sealant with a primer, but DOWSIL™ 756 SMS has sufficient adhesion without priming, so we could eliminate that step."

## Testing

The sealant was initially proven in evaluations at Dow analytical facilities. "It was first tested for adhesion, substrate compatibility and stain resistance," continued Haley Greer's Benson. "The key participants then collaborated on a two-story mock-up that was built to confirm the performance of all components, focused primarily on testing for water intrusion," he said.

Two other DOWSIL™ silicone products were also used in specific applications at the Pier 1 Imports Corporate Headquarters.

"There were some unusual expansion joints that would accommodate a large amount of movement, and we needed a very low-modulus material there," Baker added. Contractors used DOWSIL™ 790 Silicone Building Sealant in those applications for its outstanding flexibility, in addition to nearly 14,900 lineal feet of DOWSIL™ 795 Silicone Building Sealant for structural joints.

## For more information

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