

Product
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Architectural Specialty Solutions

Interiors + Exteriors

Formglas[®]

PRODUCT DATA SHEET

INTERIOR FINISHED CARPENTRY

Faux Concrete Gypsum Castings
MasterFormat® 06 20 23

Concreeet™ by Formglas®

For Interiors

Trade Name

Formglas® Concreeet™



Common Names

Faux Concrete Gypsum Castings
Faux Concrete Castings
Simulated Concrete Finishes

Manufacturer

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CONCREEET™ VENEER WALL PANELS

CALVIN KLEIN, NEWPORT BEACH

Summary

Concreeet™ is a lightweight pre-finished alpha gypsum cement-based material used to fabricate panels and elements that simulate the appearance of poured-in-place or trowelled concrete. Used in interiors as feature walls, beams, ceiling elements and column cladding, Concreeet™ is supplied in components that are easy-to-handle and install on common interior wall substrate and framing. This allows architects and designers to introduce contemporary concrete finishes where desired. Concreeet™ has a Class A (or 1) flame-spread rating.

Detailed Description

Concreeet™, is a proprietary GFRG-based material solution for adding concrete finishes into existing interior spaces, or extending the use of concrete finishes where existing concrete walls and columns are exposed and featured. Concreeet™ elements are manufactured with integral color pigments so that the material color extends below the surface. Natural aggregates are incorporated into a matrix of alpha gypsum cement and glass fiber reinforcement. This provides the molded Concreeet™ elements with added strength and flexibility in addition to an enhanced aesthetic appearance. Concreeet™ parts may incorporate embedments of steel or wood for added strength and to provide a means for attachment, suspension and stiffening. Yet, the final material is extremely lightweight ranging from 2-5 lb/ft² ⇔ 10-24 kg/m³, depending on the design and application. Concreeet™ components are lighter than real concrete elements that require weeks of curing and may yield a final finish or color that does not meet the desired aesthetic intent.

Concreeet™ is also a superior alternative to the wet, multi-step and multi-day in the field applications of trowelled on faux concrete finishes. Pre-finished Concreeet™ components are erected in hours in a manner similar to installing finished carpentry.

Concreeet™ is commonly used for interior wall cladding, beams, columns, retail store fronts and displays, and other decorative elements. The material is available in a variety of natural color tones and finishes including poured concrete (our standard) and planked. Designers may specify a custom finish to incorporate additional variations that match existing concrete surfaces in the field. Natural surface and color variations may occur within and between parts consistent with that of poured-in-place concrete.

Most Concreeet™ parts are fastened with adhesive, clips or other methods of concealed mechanical fastening. Ceiling elements are usually wire-suspended. Depending on the design, joints may be dry-buttetted or caulked.

Concreeet™ components are custom-made to project design requirements and specifications. Formglas® uses a combination of 5-axis CNC technology, in-house sculpting, and expert pattern making skills to make authentic and precision master models from which molds are produced to make the required parts. In situations involving complex design elements or projects, Formglas® will work with architects and designers to develop a practical plan for the parts and assemblies they envision through 3D modeling and/or scaled or full-size mock-ups. Detailed shop drawings and material samples are prepared for approval prior to manufacture.

Technical Data

Refer to the following standards:

ASTM International (ASTM)

- E84 - Standard Test Method for Surface Burning Characteristics of Building Materials

International Standards Organization (ISO)

- 1182 - Reaction to fire tests of products - Non combustibility Test
- 1716 - Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value)

International Maritime Organization (IMO)

- FTP Code (IMO resolution MSC 61/67)

Physical and Mechanical Properties

Formglas® uses alpha gypsum cement that is mined and processed in the USA from some of the world's purest deposits. Throughout the fabrication process, the gypsum material is subjected to strict inspection and testing to guarantee its high level of quality. Our prominent gypsum suppliers certify the raw materials are in compliance with the ASTM Standard C1355.

Matrix:	Alpha Gypsum Cement and various aggregates
Finish:	Standard colors and color matching available.
Surface:	Standard, fine and molded textures available.
Factory Finish:	Clear non-gloss sealer
Density:	~100 lb/ft³ ⇔ 1600 kg/m³
Weight:	
Veneer panels:	2-2½ lb/ft² ⇔ 10-12 kg/m²*
Molded parts:	2½-5 lb/ft² ⇔ 10-24 kg/m²*
Veneer thickness:	5/16" ⇔ 8 mm nominal
Shell thickness:	5/16" ⇔ 8 mm nominal**
Edge thickness:	¾-1¼" ⇔ 19-32 mm typical
Embedments:	Galvanized steel or wood (if required)
Glass Fiber:	5% typical
Max. length moldings:	8' ⇔ 2.4 m
Max. size veneer panels:	48" x 36" ⇔ 1200 x 900 mm
Max. size molded parts:	40 ft² ⇔ 3.7 m²

* Typical weights – parts with deep surface relief, etc. may weigh more. Please submit drawings for a more accurate estimate.

** Subject to manufacturing tolerances. Weight and measurement conversions may be rounded.

ASTM Standard and ISO Test Results

Flame Spread:	0
Smoke Development:	5
Behavior at 750°C:	Pass
ISO Reaction to Fire Tests	
Mass Loss:	20%
Temperature Difference:	2.7°F ⇔ 1.5°C
Duration of Ignition > 5 sec:	0
Gross Heat of Combustion:	258 Btu/lb ⇔ 0.6 MJ/kg

Manufacturing Tolerances

Veneer Thickness:	± 1/16" ⇔ 1.5 mm
Dimensional (all directions):	± 1/16" ⇔ 1.5 mm
Bowing, out of plane	3/32"/ft ⇔ 5 mm/300 mm
Molded Part Thickness:	-1/16 to +3/16" ⇔ -1.5 to +5 mm
Dimensional (all directions):	± 3/16" ⇔ 5 mm
Bowing, out of plane	3/32"/ft ⇔ 2.5 mm / 300 mm

LEED®



Formglas® products contribute toward LEED® credits, and have been used in LEED® projects worldwide. Since Formglas® products are usually custom-made to project specifications, their contribution to credits may vary. Contact Formglas® with specific details of your project and to clarify the version of LEED® rating system applicable.

Other Classifications and Approvals

In addition to ASTM and ISO testing, Concree™, as a derivative of QuarryCast® and Formglas® GFRG, has been tested at the Centre Scientifique et Technique du Bâtiment (CSTB) in France and is classified "M0". This classification refers to building materials that are non-combustible. The material has also been tested by SINTEF, which is the largest independent research organization in Scandinavia and classified as a non-combustible material, in accordance to the IMO A.472 standard, and in Germany to DIN EN ISO 1182.

It is also approved for use on marine vessels with Module "B" and "F" Certificates of Approval in accordance with the International Maritime Organization (IMO) and Marine Equipment Directive (MED) regulations.

■ Delivery, Storage and Handling

Concree™ parts shall be transported and handled in a manner that avoids damage or excessive stress. Packaging or components showing signs of damage should be marked as such on freight documents, inspected immediately, and claimed for any damage due to shipping with the freight carrier. Advise the carrier and Formglas® of any damage immediately. Concree™ parts shall be protected from rain, snow, sunlight, excessive weather conditions, high levels of humidity, and job site damage. To prevent distortion, warping, and other physical damage, Concree™ parts shall be kept clean and stored on a dry surface and not stacked or leaned on each other. Use clean gloves as required to ensure oils, adhesive and other contaminants are not transferred onto the pre-finished surface.

■ Preparatory Work

Do not deliver or install Concree™ parts until the building is enclosed and weatherproof, wet work is complete, and the HVAC system maintains temperature and humidity at normal occupancy levels. Acclimatize Concree™ parts for a minimum of 48 hours to the ambient temperature and humidity levels of spaces in which they are to be installed. It is the installing contractor's responsibility to order the correct material quantities (including a waste allowance) and verify the field dimensions and conditions for inclusion into the shop drawings.

Site Conditions:

Review the site conditions for compliance with Formglas' requirements relating to environmental conditions, installation tolerances and any other conditions that may affect the installation and performance of Concree™ parts. Any unsatisfactory conditions are to be corrected prior to installation. Field measurements are to be taken to verify the dimensions, including those not shown on the drawings, and provide specific details of any changes for inclusion into Formglas® shop drawings prior to it commencing the manufacture of custom molds and Concree™ parts. Formglas® will produce parts in accordance with the approved shop drawings only, and is NOT responsible for any deviations between the site conditions and the approved drawings.

Substrates:

The framing and/or substrates to accept Concree™ parts shall be surfaced with suitable materials (e.g. plywood for veneer or flat surface solutions) and installed straight and true within 1/8" in 8 linear ft. ⇔ 3 mm in 2500 mm and shall be free of obstruction and interference that prevents the correct positioning and attachment of the

Concree™ parts. Metal framing members shall be of the proper size and design for the intended use and shall be sufficient to properly support the installed Concree™ parts. Metal framing members shall be installed in accordance with ASTM Standards C754 or C1007, as required.

■ Installer Safety

Installers are to wear appropriate personal protection equipment when handling or installing Formglas® materials. This should include eye protection, gloves and dust masks. Please adhere to local regulations and rules established at the job site. Before handling and installing Formglas® materials, installers are responsible for reviewing SDS information which is readily available at www.formglas.com, or included with the crate(s) used to ship Formglas® materials, or by calling Formglas® at 1.866.635.8030.

■ Installation

General:

Install Concree™ parts as indicated on the approved shop drawings, instructions and the contract documents. The installing contractor is to supply and install all brackets, and shims for the installation and proper alignment of the Concree™ parts with adjacent parts and materials. Part thicknesses may vary per manufacturing tolerances. Allow for shim spaces between the Concree™ and the substrate. Attach the molded Concree™ parts to substrates and framing with screws or other fasteners as shown on the shop drawings. Additional bracing, fastening points etc. not shown on the drawings, may be required to ensure a proper installation. Where Concree™ parts are suspended use all the suspension points indicated on the shop drawings or on the back of Concree™ parts as a minimum requirement, and use additional support(s) as required. Columns, large parts etc. are to be face-fastened as shown on shop drawings. Any screw holes are to be filled with Formglas-supplied patching compound. Where Concree™ veneer panels are adhered to surfaces, use a nail gun with 18 gauge nails and a Formglas® recommended brand adhesive only (PL® Premium®). See Installation Instructions for Formglas® QuarryCast® for complete details.

Cutting:

When Concree™ parts require cutting, use the most suitable cutting method listed below. If circumstances allow, cut parts outdoors or in a well ventilated area. Always wear goggles and a dust mask.

- A miter or table saw with a diamond or "abrasive" cutting blades (e.g. 12" ⇔ 305 mm Makita® A.01345). Carbide blades with 80+ teeth work well but dull quicker.

- For irregular cuts use a reciprocating saw, such as a jig saw, with tungsten carbide blades (e.g. Milwaukee® 48-00-1420)
- For small cutting operations a mini grinder with a 4" ⇄ 100 mm diamond blade can be used.

Edge Finishing after Cutting:

For moldings, columns, and other molded components, lightly sand cut edges with a sanding block or mini sander with #80 - #120 grit sanding sheets.

For veneer panels, use a sanding block with #80 - #120 grit sandpaper to produce a 45° bevel to match the edges supplied direct from the factory.

Attachment:

For moldings, columns and other molded components, face fasten with screws. Pre-drill with carbide bits and countersink holes approx. 1/8" ⇄ 3 mm below the surface along the embedded reinforcement and secure with #8 or similar screws on 16" ⇄ 400 mm o.c. Refer to the shop drawings for specific details and the location of the reinforcement materials. Screw holes are to be filled afterward with Formglas-supplied patching compound. Use joint spacers to maintain a uniform joint spacing of 1/8" ⇄ 3 mm.

For veneer panels, apply walnut-sized dabs of a Formglas® recommended adhesive (PL® Premium®) on the panel back approx. 9" ⇄ 225 mm o.c. and slide into position. Keep adhesive back from panel edges to prevent the adhesive from being squeezed onto visible surfaces (remove any adhesive immediately from the face of Concree™ parts). To hold the panels in position until the adhesive sets, use a nail gun with 18 gauge nails (plywood is the preferred substrate for this purpose).

Adhesive:

Use a Formglas® recommended brand adhesive (PL® Premium®) marketed under Loctite® and LePage® brand names to prevent the possibility of bleed-through. Take precautions to keep the adhesive off the face of the Concree™ parts. Refer to the Installation Instructions.

Joint Treatments:

For Dry Joints:

- For veneer panels, butt the Concree™ parts and leave the joints dry. Not recommended for columns, cornices, or trims.

For Caulked Joints:

- Formglas® does not supply caulk for joints but can recommend a brand and color of caulk for use with specific Concree™ colors.
- Use spacers to maintain a uniform gap of approx. 1/8" ⇄ 3 mm and apply masking tape on each side of the joint. Do not use wide joints.
- Avoid smearing caulk beyond the joint and remove any excess immediately with flexible scraper.
- Veneer panels may have dry joints, open joints with accents strips (e.g. metal or laminate), or caulked joints.
- Caulk between Concree™ and different materials.
- Do NOT attempt a monolithic look - joints cannot be hidden.

Hole Filling and Patching:

- **Hole Filling:** Finger fill screw holes with matching Concree™ patching compound avoiding smearing it beyond the hole. Remove excess compound immediately with a flexible scraper. The compound will blend in after 24 hours.
- **Cracks or Chips:** Treat as screw holes (above).
- **Minor Scratches and Gouges:** Due to the Concree™ texture, minor damage usually does not detract from the general appearance.

Always use patching compound sparingly

Avoid smearing compound beyond the holes

Always remove excess compound immediately

■ **Cleaning and Maintenance**

- Concree™ has a factory-applied clear acrylic sealer to reduce staining and make cleaning easier.
- Clean Concree™ parts with water and mild soap solution using a lightly-moistened sponge.
- Excessive dirt, pencil and rubber marks etc. can usually be removed with a multi-purpose spray cleaner such as Spray Nine®. Begin with a diluted cleaner, increasing the strength as required and wiping afterwards with a lightly-moistened cloth. Do not use powdered cleansers.

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INTERIOR FINISHED CARPENTRY

Faux Concrete Gypsum Castings

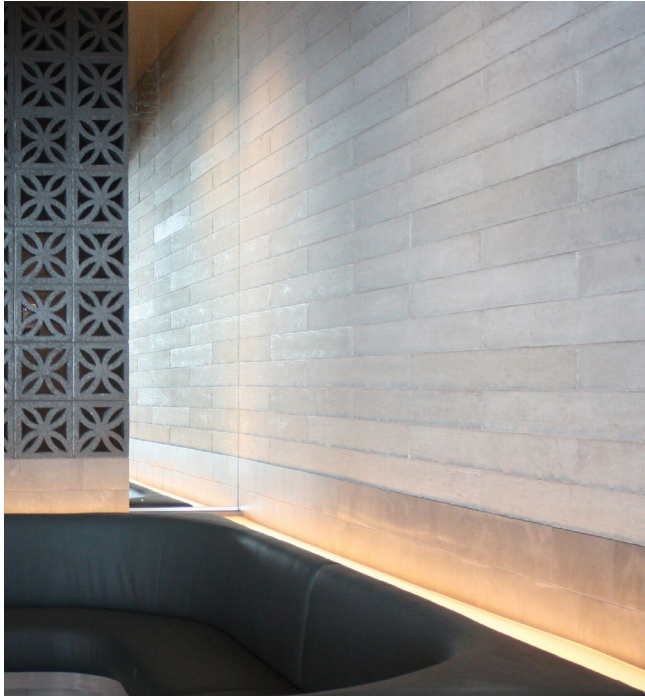
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Concree™ by Formglas®

For Interiors

Applications

To view photos of Concree™ applications, or to contact a local Formglas® representative, visit www.formglas.com.



PLANKED VENEER FEATURE WALL

ONE RESTAURANT, NEW JERSEY



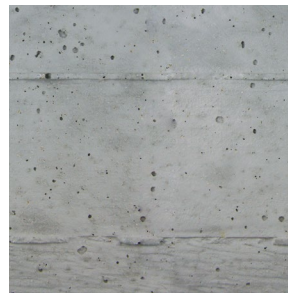
COLUMNS, ENTRANCEWAYS, MOLDINGS

ASELLINA RISTORANTE, NYC

Samples Available

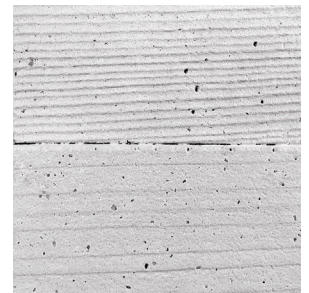
Formglas® is able to custom-formulate Concree™ to match an array of colors, textures or finishes. In addition, Formglas® maintains an inventory of four standard samples to demonstrate this material. To request a sample, contact samples@formglas.com or your local Formglas® representative to discuss your specific project requirements.

Please note that images and their color(s) are for general reference and may not be accurately rendered on screen or in print.



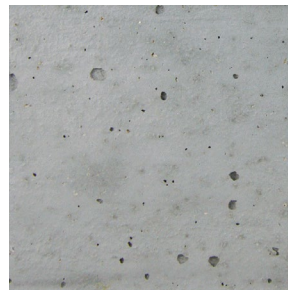
Concree™

Color: Concrete Grey
Surface: Standard
Pattern: Board-formed Planking
Sample Size: 4" x 5"
Sample Code: 98070



Concree™

Color: Light Grey
Surface: Fine
Pattern: Displaced Planking
Sample Size: 4" x 5"
Sample Code: 98192



Concree™

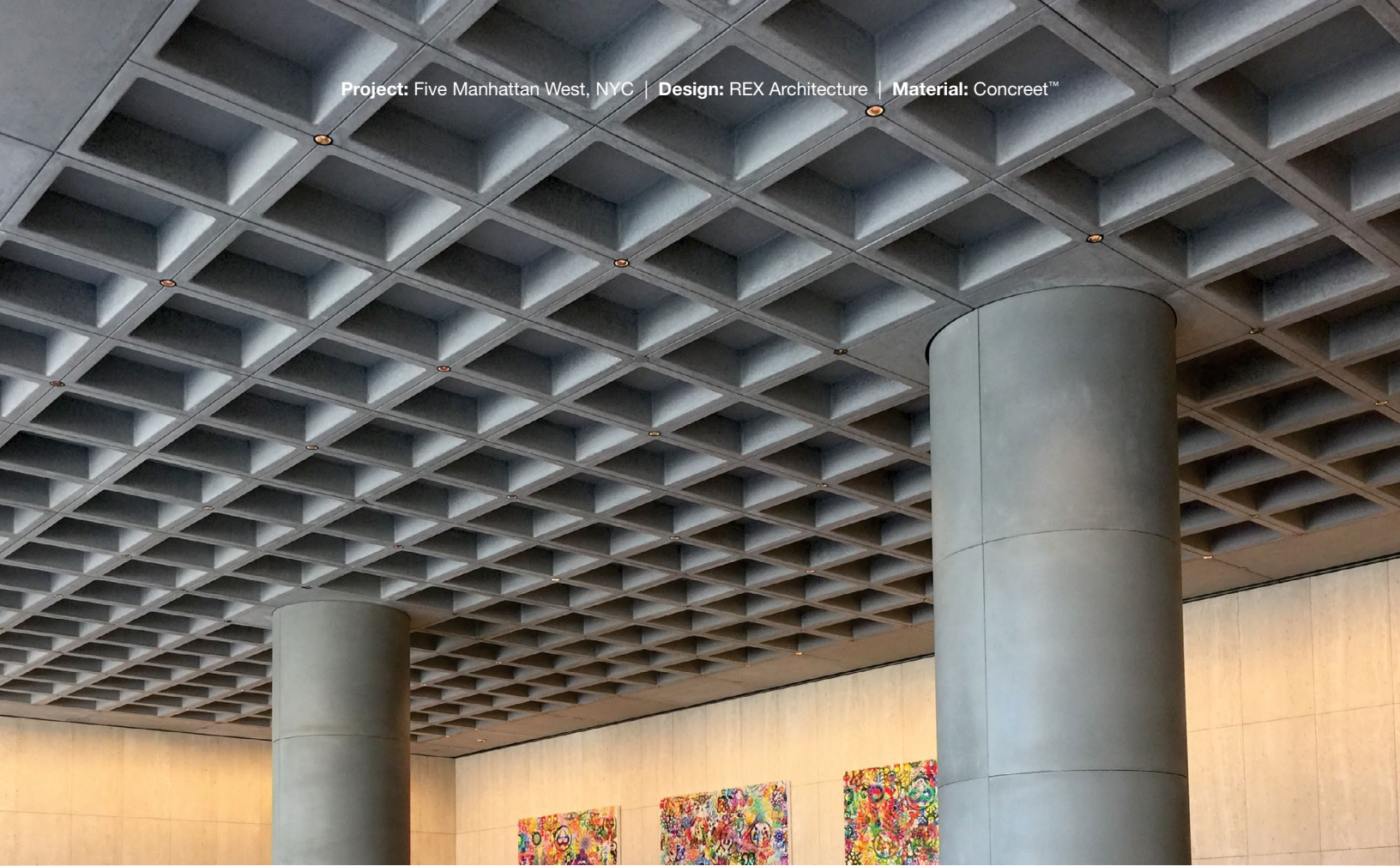
Color: Concrete Grey
Surface: Standard
Sample Size: 4" x 5"
Sample Code: 98144



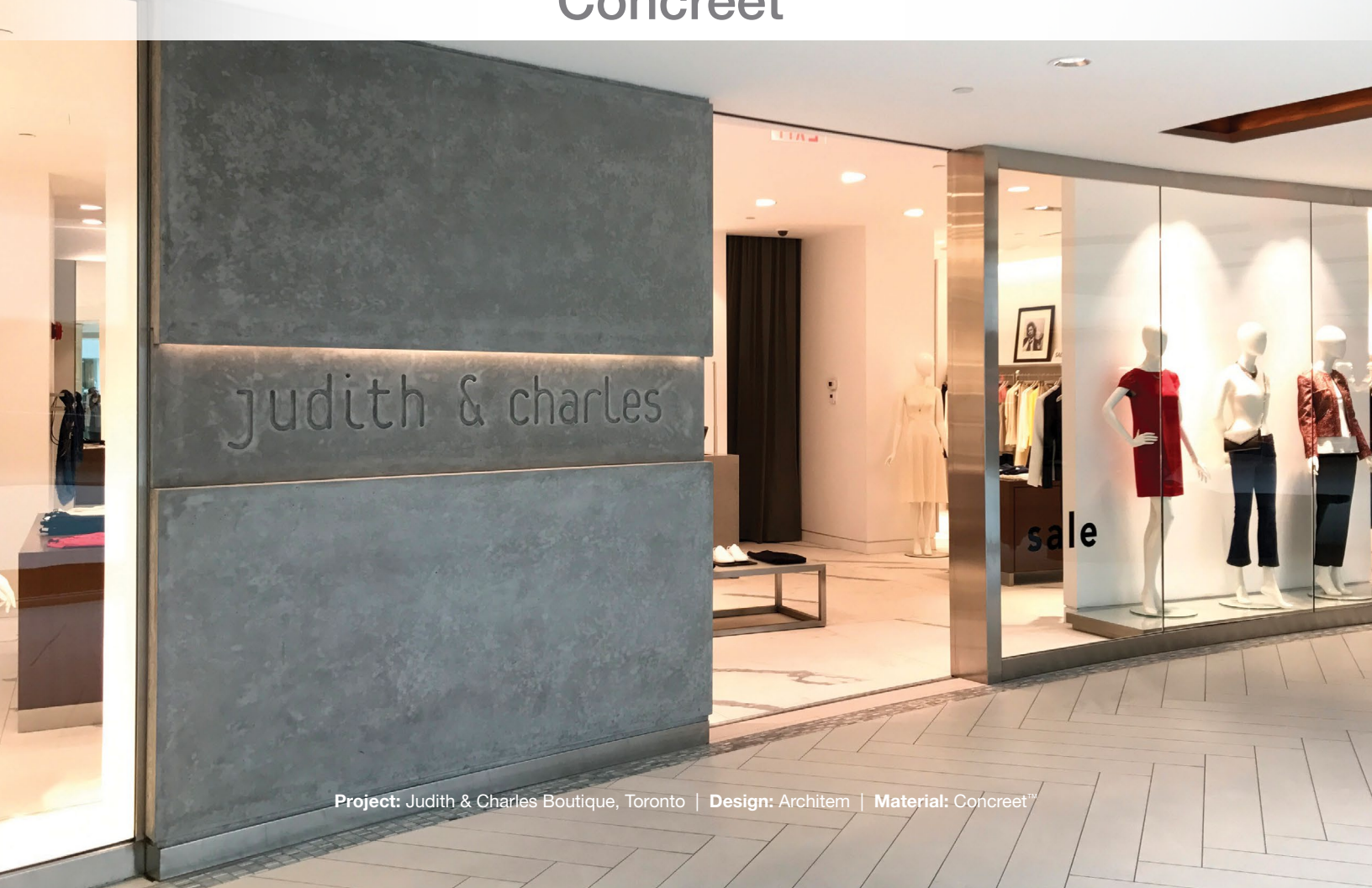
Concree™

Color: Concrete Grey
Surface: Fine
Sample Size: 4" x 5"
Sample Code: 98196

Project: Five Manhattan West, NYC | Design: REX Architecture | Material: Concreet™



Concreet™



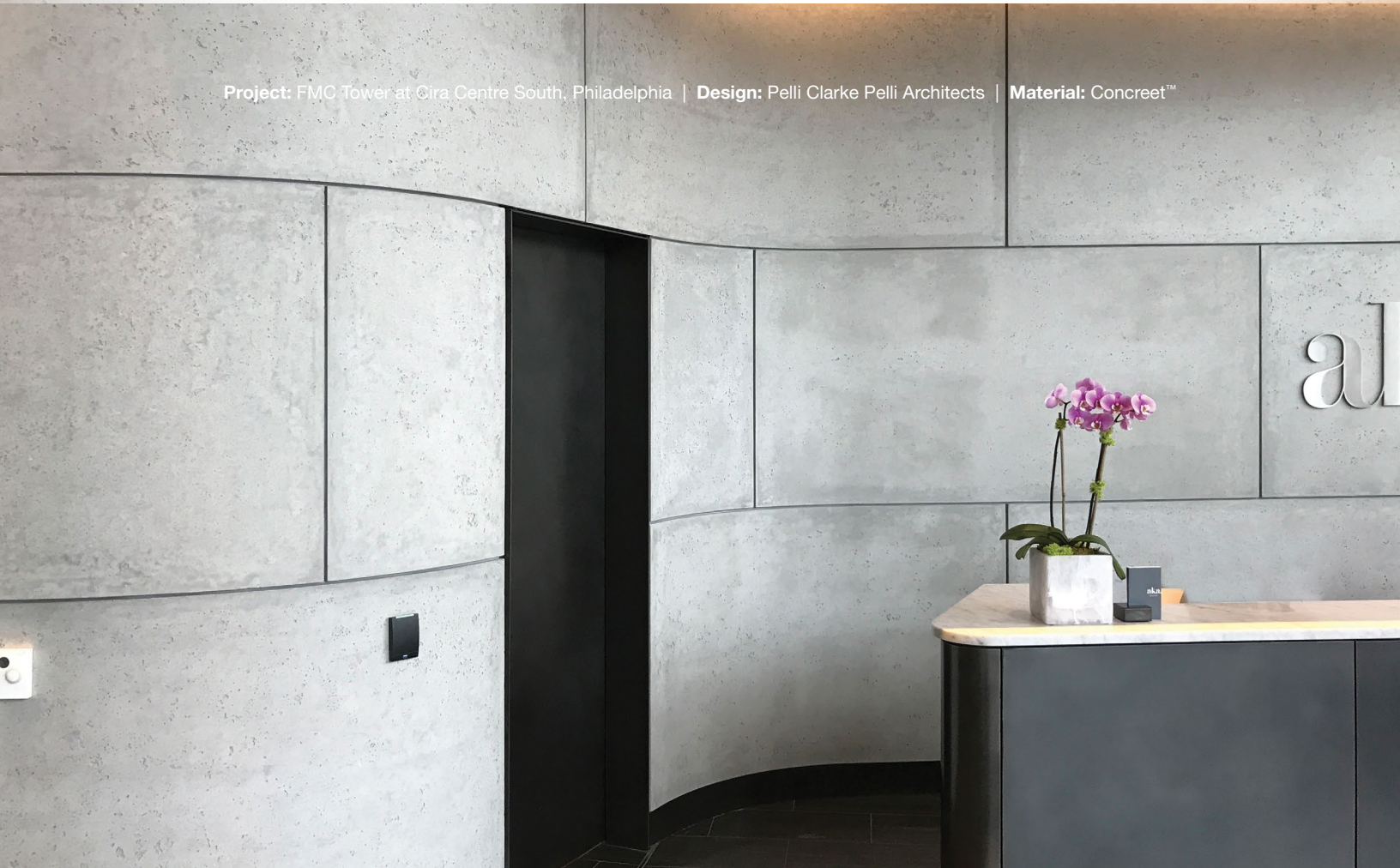
Project: Judith & Charles Boutique, Toronto | Design: Architem | Material: Concreet™

Project: FMC Tower at Cira Centre South, Philadelphia | Design: Pelli Clarke Pelli Architects | Material: Concreet™



Concreet™

Project: FMC Tower at Cira Centre South, Philadelphia | Design: Pelli Clarke Pelli Architects | Material: Concreet™



Shaping Possibilities™

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