

# CORIAN® ENDURA™

## INTERIOR VERTICAL APPLICATIONS

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### Introduction

This fabrication bulletin addresses the basic design concepts for vertical applications of Corian® Endura™ high performance porcelain.

### Overview

Typical backsplashes of less than 150 mm (6") are installed using typical techniques with 100% silicone adhesive. Larger applications will require additional considerations.

Due to the weight of Corian® Endura™ the use of 12-mm thick slabs is recommended for the majority of vertical applications with the exception of standard height backsplashes and the vertical portion of waterfall countertops.

Corian® Endura™ can be installed in a vertical position if expertly installed. Installations should only be designed and installed by individuals with demonstrated skills in large format porcelain slab installation. Due to the nature of the porcelain material and its weight (up to 337 lbs. (153 kg) for a 12 mm slab), there are technical and safety challenges to be considered when installing this type of material vertically, including – but not limited to – the below points:

- The structural strength of the wall/building should be checked to make sure it can withstand the structural load from the weight of the material,
- Appropriate know how, techniques and tools are required to safely secure pieces of porcelain material on a wall; these can include, but are not limited to, the use of specific adhesives and/or mortars, mechanical fasteners, anchoring systems, rail systems, etc.,
- Installers should always use safe methods to handle, move and position the material on the wall. Working with smaller pieces of material is one way to mitigate the risks associated with lifting and hanging heavy materials.

### A. Panel Preparation

General cutting guidelines, guidance for cutouts and edge profile guidance apply. These are covered in *Corian® Endura™ Design* (K-30200).

### B. Design

There should be a minimum 2 mm (<sup>3</sup>/<sub>32</sub>"") gap between slabs for interior vertical application. Fill this gap with grout suitable for porcelain. Avoid having large sections of slab on both sides of a cutout, adding seams if necessary.

There are both mechanical and adhesive methods of attaching slabs to a wall structure. Adhesive methods may require safety anchoring systems. The design must comply with any local building codes, which may require anchoring systems and may provide specific guidance for wet applications.

### C. Installation Techniques

For mechanical hanging systems check with the vendor for guidance. Adhesive based installation methods are based on tile installation techniques and installations should be done by those familiar with these techniques. For safety anchors follow the guidance from the manufacturer for installation.

Safety is a key consideration due to the size and weight of slabs, which for a full trimmed 12-mm slab is 337 lb. (153 kg)

Slabs can be cut to smaller sizes for handling and safety.

### D. Substrates

Use substrates specified for tile installation. The substrate and wall structure need to be able to accommodate the weight of the slab(s). There may be additional requirements (performance or building code) for wet applications.

### E. Adhesives and Grout

Use adhesives designed for bonding to tile substrates (horizontal or vertical). These must meet ANSI A118.15HE or ISO 13007 C2TE S1. Consult with the adhesive manufacturer if adhesive does not list standards compliance.

Adhesive application is with a 3-mm tile trowel on the slab, and a 10-mm V-notch or 15-mm U-notch trowel on the substrate. Apply in a single and identical direction for both the slab and the substrate parallel to the short edge to aid in air removal when bringing the slab and substrate together.

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### F. Mechanical Support & Safety Attachments for Adhesive Attached Slabs

Installation of slabs in vertical applications must meet any local codes. Safety anchors are recommended for sizes over 60 cm (2 ft.) on longest side.

“Safety anchors”, “anchoring systems” or “safety withholding hooks” are safety features that restrain slab if adhesive bond fails. The manufacturer of these anchors will provide specific guidance for number and spacing of anchors. They also sell equipment to aid in installation.

A support in an edge slot in the bottom of a slab may be used to support the bottom of smaller sections (i.e. a countertop waterfall).

### G. Additional Resources

For additional research on this topic, please review guidance from the Natural Stone Institute *Dimension Stone Design Manual - Chapter 15 Vertical Surfaces*. <http://pubs.naturalstoneinstitute.org/pub/2de67591-e0d4-196e-0566-f134cca32b13> This document is designed for stone, but many mechanical anchoring systems are similar.

Another resource is ANSI A108.19-2017 *American National Standard Specification for Interior Installation of Gauged Porcelain Tile Panels/Slabs by the Thin-bed Method Bonded with Dry Set Cement Mortar of Improved Modified Dry-Set Mortar*.

Equipment manufacturers for mechanical hanging systems and safety anchors also offer tools, anchors and guidance on use. The generic term for this category of product is “large format tile”.

### H. Referenced Documents

*Corian® Endura™ Design* (K-30200)

Natural Stone Institute *Dimension Stone Design Manual - Chapter 15 Vertical Surfaces*

ANSI A108.19-2017 *American National Standard Specification 00for Interior Installation of Gauged Porcelain Tile Panels/Slabs by the Thin-bed Method Bonded with Dry Set Cement Mortar of Improved Modified Dry-Set Mortar*

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