

CORIAN® SOLID SURFACE HOT/COLD FOOD SERVICE

Introduction

This fabrication bulletin addresses the design, fabrication, and installation of Corian® Solid Surface in food service applications with hot and cold elements. Prior knowledge of basic Corian® Solid Surface fabrication is required. For topics not covered by this application specific bulletin, general fabrication guidance bulletins apply.

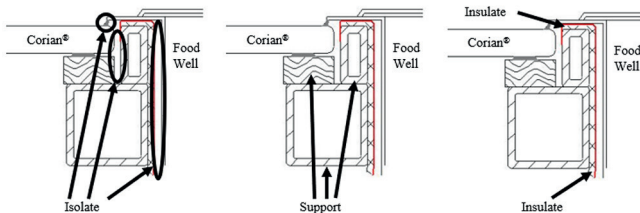
There are many elements in a successful design, fabrication, and installation. Multiple companies may be involved. It is important that all parties are aware of and follow the guidance in this bulletin.

Overview

Successful food service countertop designs require careful attention to detail. This application involves additional thermal stresses due to hot and cold elements as well as additional mechanical stresses due to equipment and many cutouts. This bulletin is intended to provide guidance for fabrication and installation of Corian® Solid Surface in food service applications.

The requirements and recommendations in this technical bulletin will help ensure long lasting food service installations. The critical concepts of a food service installation are: Insulate, Isolate, and Support.

- Insulate Corian® Solid Surface from all potential heat sources, such as food wells or cooktop inserts, with Nomex® insulation and heat reflecting aluminum tape where specified to protect the Corian® Solid Surface from thermal stresses.
- Isolate the Corian® Solid Surface from stresses caused by the weight of appliances or equipment placed on top of the surface by providing independent structural support. Isolation also applies to insulation from thermal elements.
- Support the countertop and all equipment or appliances with sturdy, correctly installed materials.



Insulate, Isolate, and Support Illustrations

To better understand Insulate, Isolate, and Support, picture the food service application without the Corian® Solid Surface installed. All equipment (appliances, hot wells, ice bins, etc.) should be supported by the support frame so that no additional support is needed from the countertop. Corian® Solid Surface is a durable surface, however, it should be treated as a decorative surface that must be insulated, isolated, and supported to avoid excessive thermal and mechanical stresses.

Note: DuPont provides a product only warranty for Corian® Solid Surface in commercial applications.

A. Safety

Corian® Solid Surface can be cut and worked like wood. Shavings and dust are created when cutting and sanding the product. It is best to minimize dust and shavings by containing them with a vacuum collection system. Use proper safety equipment when working with Corian® Solid Surface, including safety glasses, gloves, steel-toe shoes, and ear plugs. Lifting devices or carts may be used to improve safe handling of larger pieces. K-25283 *Corian Solid Surface Safety Recommendations* provides more information.

B. Design

A successful food service installation involves many elements, and, in many cases, multiple parties are involved in the project. Food service equipment is often heavy and food safety requirements impose a wide range of temperatures that could create stress in the countertop. The design must support equipment loads, minimize thermal stress, and allow for thermal movement.

The design basis starts with the standard guidance for Corian® Solid Surface and is then adapted to provide additional support and insulation for equipment. Design should start with the equipment needed. The support structure needs to independently support equipment as well as the countertop surface. Cutouts need to be sized and spaced to allow for equipment support and insulation requirements.

Food equipment should not be sub-mounted. It should be surface mounted to prevent steam or condensation from being trapped below the countertop.

C. Common Causes of Failures

Most failures come from a combination of insulation and support errors, generally near heat sources. These are avoidable with proper design, fabrication, support, insulation, and installation.

Common problems include:

Support related

- Improper support
- Support structure is not flat and in-plane
- Loads improperly supported

Temperature related

- Improper insulation
- Direct contact with heat sources
- Excessive heat (heat lamp, poorly controlled equipment)
- Thermal cycling
- Large temperature gradients

Fabrication related

- Smaller than recommended inside corner radii
- Improper seam placement

Installation related

- Restricting movement, not allowing expansion and contraction
- Not inspecting support and insulation prior to installing the countertop. Once the countertop is installed flaws may be hidden.

Other

- Moisture, particularly steam trapped under top from improperly installed steam trays

D. Pre-Job Planning

- Confirm the route to install location. Can large pieces be transported along route?
- Will the facility be operational during install? This may impact work hours, dust/fume control requirements, etc.
- Support structure – who's designing, building if you're not? It is essential that the support structure provides proper support for the countertop
- Who is doing the installation, is the installer adequately trained?
- Who is installing the hot/cold (food service) equipment? Is the installer aware of installation requirements?
- Does the color selected have a directional pattern? This may affect sheet utilization and affect seam locations. K-26833 *Corian® Solid Surface Directional Aesthetics* identifies colors with directionality.

- Consider "abuse". Is there overhead lighting or equipment where the countertop may be a convenient place to stand to access them. Does a tray slide make a convenient "seat"? Is there a flat location close to an oven where hot trays might be set that should have a hot pad installed? School environments may see rougher treatment. More robust support may be indicated in these situations.

E. Thermal Isolation

To reduce stresses on the countertop from hot and cold food equipment, the countertop should be thermally isolated from the equipment. This is done through maintaining physical gaps between the food equipment and the countertop. This is discussed in F.2 Hot and Cold Food Wells.

Avoid bridging physical gaps, particularly with metal such as flanges, aluminum tape, etc.

Food equipment in cutouts is insulated from the countertop and support structure using Nomex® insulation and aluminum tape. This is discussed in H. Insulation.

F. Cutouts

Cutouts are a common element of food service installations. These cutouts can be a source of stress on the surface. This section focuses on proper creation of the cutout. Support and insulation are covered in separate sections.

There are three common types of cutouts. Each with their own considerations for proper fabrication and installation.

- Standard ambient temperature cutouts such for silverware or waste bins.
- Cold Wells for cold food storage below (40°F/4°C)
- Hot Wells for hot food storage above (140°F/60°C)

Note: These temperatures are provided as general guidelines for countertop design. Local regulations may vary. Specifier should provide equipment temperature setpoints.

When sizing cutout account for the space required for the support structure, insulations and gaps to cutout edge and equipment. This may be larger than the cutout size recommended by the equipment manufacturer.

F.1. STANDARD CUTOUTS

All standard ambient temperature Corian® Solid Surface cutouts must have:

- At least a 5 mm (³/₁₆") inside corner cutout radius. Larger is more robust.
- Been made with a 10 mm (³/₈") or larger diameter router bit to prevent chatter

- 3 mm ($1/8$ ") clearance between the food well support and both the countertop and countertop support edge. NOTE: This clearance includes corners. As the countertop requires an inside radius and food well supports often will have square outside corners, maintaining a 3 mm ($1/8$ ") clearance at the corners means the clearance will be greater on the sides.
- Top and bottom edges rounded over for a finished edge radius of at least 3 mm ($1/8$ ")
- All nicks, tool marks, etc. removed with 150-grit or finer sandpaper
- Support within 75 mm (3") from the cutout edge

Note: Cutouts exposed to temperature extremes, like hot and cold food wells, have additional requirements.

F.2. HOT AND COLD FOOD WELLS

Support and insulation requirements in addition to all standard cutout requirements for hot and cold food wells include:

- 3 mm ($1/8$ ") nominal overlap of the food well flange over the countertop
- 1.5 mm ($1/16$ ") vertical clearance between the food well flange and the countertop surface which is to be filled with silicone sealant.
- 3 mm ($1/8$ ") clearance between the food well support and both the countertop and countertop support edge. NOTE: As with standard cutouts, this clearance includes corners. Maintaining a proper radius and 3 mm ($1/8$ ") clearance at the corners means the clearance will be greater on the sides.
- 3 mm ($1/8$ ") expansion clearance for the entire perimeter of the food well equipment (distance between food well equipment and insulation)
- High-strength corner blocks are required for any cutouts subject to temperature fluctuations, including all hot and cold food wells (exception is circular cutouts)
- Insulate between food well and both the food well support and main support structure
- Use supports to isolate the weight of drop-in food well equipment from the Corian® Solid Surface

High Strength Corner Blocks

Corian® Solid Surface high-strength corner blocks help reinforce and support the inside corners of the cutout. They are:

- Required for all hot and cold food well cutouts because of the thermal loading
- Made with the same or lighter color Corian® Solid Surface than the countertop
- At least (150 mm x 150 mm) 6" x 6" with a minimum depth of 35 mm ($1-3/8$ ") after routing the corner as seen in Figure F-1: High-Strength Corner Block

- Minimum 5 mm ($3/16$ ") inside corner cutout radius. Larger is more robust. The radius should be as large as the equipment flange allows.
- Been made with a 10 mm ($3/8$ ") or larger diameter router bit to prevent chatter
- At least as thick as the countertop surface
- Attached to the bottom of the countertop surface at each inside corner with Corian® Joint Adhesive

Cutouts that do not require high-strength corner blocks:

- Small (less than 175 mm (7") diameter), round holes in a common cold cabinet. These usually hold condiments and are not subject to high stresses.
- Circular cutouts (soup wells, condiment wells, etc.). While soup wells are heavy and hot, the circular shape reduces stress. It is very important that the soup well is independently supported, and that the cutout is well insulated. Circular cutouts do require full perimeter support within 75 mm (3") of the cutout edge.

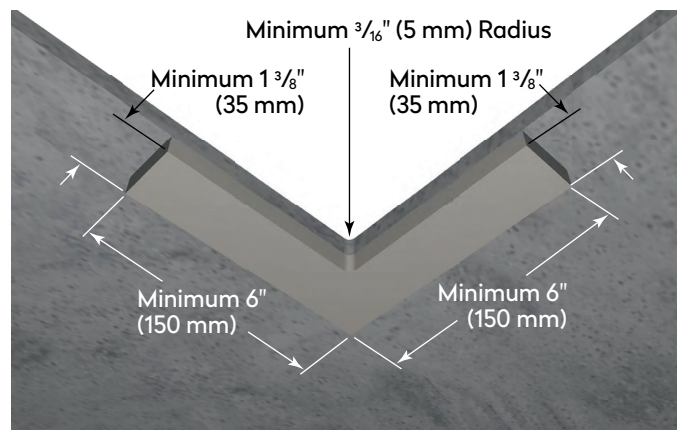


Figure F-1: High-Strength Corner Block

Cutout Underlayment and Shims

Full perimeter support is required for all cutouts. High-strength corner blocks are installed to help reinforce and support each cutout corner of hot and cold food wells. Because there is nothing between these corner blocks to create a full perimeter support surface, underlayment or shims are required between the cutout blocks. Underlayment material is typically made of moisture resistant plywood or moisture resistant MDF with a thickness of 19 mm ($3/4$ "). A 12 mm ($1/2$ ") thick moisture resistant plywood or moisture resistant MDF shim support is also acceptable in a food service cutout. Placing this 12 mm ($1/2$ ") shim support between the high-strength corner blocks will create a level perimeter surface to support the cutout. A 3 mm ($1/8$ ") expansion gap is required between the underlayment or shims and the corner blocks. Support the entire cutout perimeter surface from the main support structure. Figure F-2 illustrates a typical cutout perimeter surface necessary for food well cutouts to allow for full perimeter support from the main support structure.

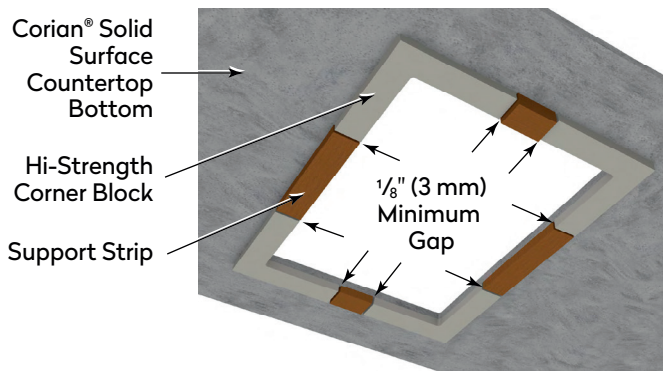


Figure F-2: Cutout Perimeter Support Structure

A 12 mm (½") shim support between high-strength corner blocks creates a level surface. However, if 19 mm (¾") underlayment is used it will extend beyond the high-strength corner block because the corner block is only 12 mm (½") thick. In this case, additional shims are required to create a level perimeter surface for the cutout. This can be done by attaching small strips of moisture resistant plywood or MDF to the corner blocks as illustrated in Figure F-3.



Figure F-3: High-Strength Cutout Perimeter with support (view from bottom)

F.3. CUTOUT SUPPORT

All cutouts should have full perimeter support within 75 mm (3") of the cutout. Circular cutouts may be supported with square supports tangent to the edges at within the same 75 mm (3"). Due to the integration required with the general support structure cutout support is covered in more detail in G. Support and J. Cutout Support Examples.

F.4. CUTOUT SPACING

Cutouts have spacing requirements to allow adequate room for insulation and support. Cutouts spacing requirements (Figure F-4) are as follows:

- 50 mm (2") between all cutouts for wells of same temperature
- 305 mm (12") distance and flexible soft seam between all adjacent hot and cold food wells to allow for the temperature differential

- 50 mm (2") between all cutouts and all deck edges
- 50 mm (2") between all cutout edges and all seams. More details are available in M.3. Seam Locations

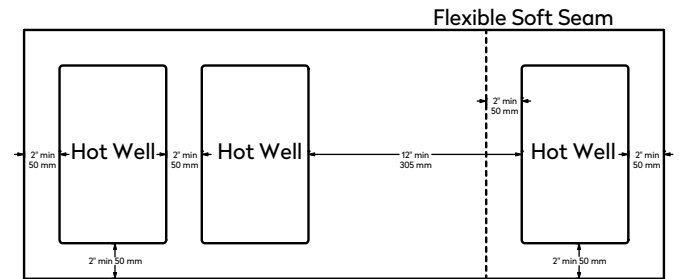


Figure F-4: Cutout Spacing Requirements

F.5. ALTERNATIVE TO MULTIPLE CUTOUTS

As an alternative to multiple cutouts appliances may be mounted in a stainless-steel mounting tray. This mounting tray must be independently supported. Having one large versus many small ones can ease fabrication and reduce risk of cutout failure.

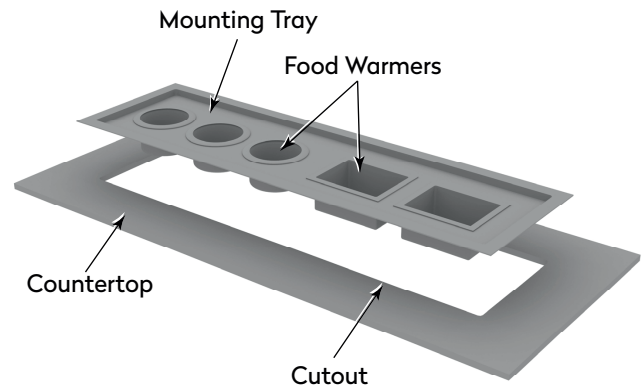


Figure F-5: Alternative to multiple cutouts

G. Support

Corian® Solid Surface is a durable surface but is not a structural material. Full support is required to reduce mechanical stresses. The support guidelines outlined in this section are for zero-load installations. Additional equipment or loads located on the counter will require additional support as detailed below.

In addition to meeting the structural support requirements, having adjustable feet to accommodate deviations from floor planarity is recommended.

G.1. EQUIPMENT SUPPORT

Following the principle of isolating Corian® Solid Surface from the weight of equipment, equipment should have dedicated support.

G.1.1. Equipment in Cutouts

Equipment in cutouts should never be supported by Corian® Solid Surface. While it may share a common support structure, the equipment should always be directly supported by the support structure. The main support structure should be designed to accommodate the weight of the equipment and contents.

In most cases equipment should not be undermounted. The equipment flanges should be above the countertop to avoid trapping heat and/or moisture below the countertop.

G.1.2. Pass Through Support

Equipment mounted above the countertop such as lighting, sneeze guards, etc. should be installed by the pass-through method. In this technique support is provided from the main support structure by passing the support through a penetration in the countertop surface.

Provide a minimum 3 mm (1/8") perimeter clearance around the penetration to allow the material to expand and contract freely. For longer tops or greater temperature ranges additional clearance may be required to accommodate movement. Sneeze guard supports that pass through the countertop and do not attach directly to it are a common example of the pass-through method. Examples of equipment that may be mounted by this method are discussed in P. Additional Design Elements. Any collars for the support rod should allow the rod to move with thermal movement. Do not secure to or clamp to the countertop surface in any way as this will restrict countertop movement.

When equipment is attached by the pass-through method to a common support structure, the weight of any equipment needs to be accounted for in any deflection determinations and support structure design.

When a pass-through support is near a cutout it is preferable to place the hole for the pass-through support along a side, not at a corner.

G.1.3. Equipment on Surface

When equipment is to be placed on top of the countertop the weight of the equipment, whether it is hot or cold, and whether the weight of the equipment will restrict movement needs to be considered. In extreme cases, it may be better to have a cutout, so the equipment is isolated from the countertop.

Heavy equipment should have dedicated support directly below the point of contact to prevent countertop deflection. All forces on the countertop should be compressive, avoiding bending and/or shear forces.

When there is a heavy load on the surface this should be considered a movement constraint. From this fixed point, the rest of the countertop needs to be able to move in response to temperature changes. If there is more than one movement constraint, then an expansion joint (silicone seam) may be required between the constraints to accommodate thermal movement.

Temporary (movable) equipment is generally acceptable if it doesn't exceed 25 lb./sq. ft. (122 kg/m²). Deflection should not exceed 3 mm (1/8").

Insulation between the countertop and equipment may be warranted if the device is excessively hot or cold.

G.2. GENERAL ZERO-LOAD SUPPORT REQUIREMENTS

The basics of support for Corian® Solid Surface and the baseline 610 mm (24") center to center ladder support structure are provided in K-25291 *Corian® Solid Surface Structural Support*. This guidance may also be used for sections of the top without cutouts or heavy equipment.

The support structure must:

- Be level, specifically, it must be in the same plane within 3 mm over 3 m (1/8" over 10'). Any welds, etc. must be flush with surface.
- Extend around the full perimeter of the countertop
- The wood cabinet perimeter may be used as support if designed to support the required weight
- Perimeter support strips may be used to create a larger, broader base to support the countertop (Reference Underlayment and Support Strip Material section for more information)
- Include full perimeter support for each hot and cold food well cutout
- Include cross supports every 610 mm (24") center to center so deflection is less than 3 mm (1/8") (test deflection by placing a 136 kg (300 lb.) weight at the center of each span). If equipment shares a common support structure the weight of the equipment plus anticipated contents (food, etc.) need to be accounted for in the determination of deflection.
- Provide support directly under all equipment or countertop loads so deflection is less than 3 mm (1/8") after the equipment is installed
- Attach the longer support rails to the main cabinet support frame and attach smaller support rails to the longer support rails.

Locations for typical support system components are shown in Figure G 1.

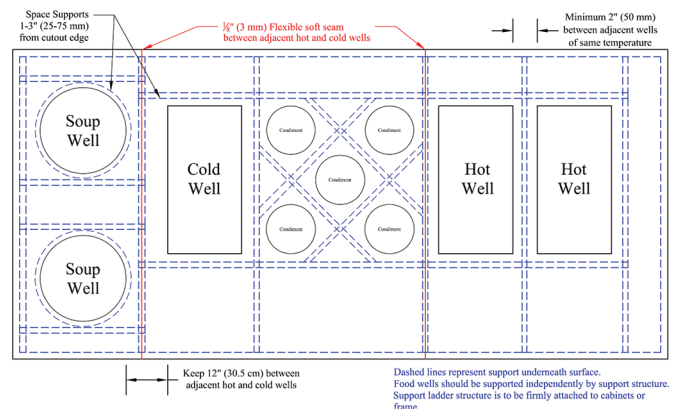


Figure G-1: Food Service Support Location Requirements

G.3. TYPES OF SUPPORT

There are two types of support and the acceptable materials vary based on the intent of the support.

G.3.1. Structural Support

Structural support is the main, load bearing structure. This support can bear loads over spans.

G.3.2. Spacer/Underlayment

Spacer/underlayment support cannot bear loads over a span. The primary role is to transfer loads vertically to structural support directly below. For compliance with support span requirement the spacer/underlayment support must be over a structural support element. For example, for a 610 mm (24") ladder structure, the primary support needs to be directly below the spacer/underlayment material with same spacing.

Corian® Solid Surface should not be used with full underlayment as it restricts heat dissipation. Use a ladder structure constructed of approved materials. The width of the ladder segments should be at least 50 mm (2").

G.4. ACCEPTABLE SUPPORT MATERIALS

G.4.1. Structural Support Materials

Metal supports are preferred. Size to meet deflection requirements.

Metal angle iron

- Tube steel, minimum 25 mm x 25 mm (1" x 1") with 3 mm (1/8") wall thickness
- Steel C Channel
- Steel I-Beam

Wood based

- Wood framing (minimum 2"x6" may be required to meet deflection guidance) should be used in vertical orientation. Horizontal orientation will not provide enough stiffness.
- Moisture resistant plywood must be a minimum of 19 mm (3/4") thick and used in a vertical orientation for structural support.
- Never use particleboard, wafer board, chip board, or equivalent products.

G.4.2. Spacer or Underlayment and Support Strip Materials

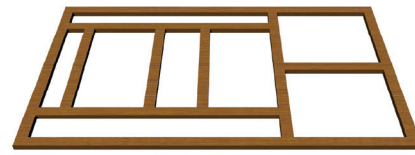
Reminder – these materials are for vertical transfer of load to a structural support member.

Metal based

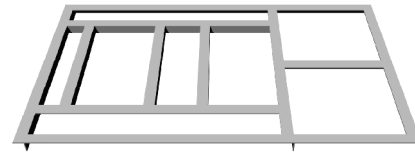
- Tube steel

Wood Based

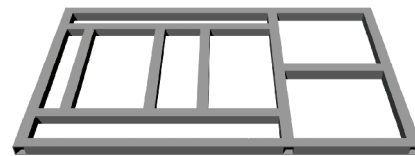
- Moisture resistant MDF, or moisture resistant plywood (MDF and plywood must be a minimum of 19 mm (3/4") thick) An exception would be support strips between high strength cutout corner reinforcement blocks where the thickness should be 12 mm (0.472") to match the thickness of the block).
- Never use particleboard, wafer board, chip board, or equivalent products



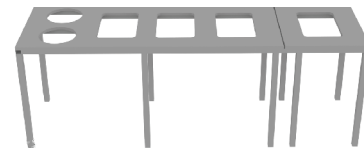
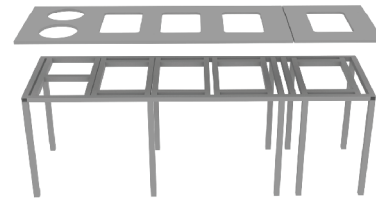
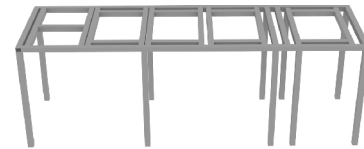
Moisture Resistant MDF/Plywood/Wood support example



Angle Iron support example



Tube Steel support example



*Independent food well equipment supports not shown

Figure G-2: Acceptable Food Service Support Material Frames

H. Insulation

H.1. INSULATING MATERIALS

Insulation of hot or cold cutouts as well as cook-top inserts is required and uses two materials, Nomex® nonwoven insulation and heat reflective 3M™ Aluminum Foil Tape 425 or 427. The Nomex® insulation provides insulation for the countertop and support structure. The aluminum foils tape reflects radiant heat and is used to attach the Nomex® insulation to the support structure. Note that the aluminum foil tape also conducts heat. It should not be applied to the Corian® Solid Surface, only to the support structure. The aluminum foil tape should cover the Nomex® insulation completely and extend at least 6 mm (1/4") beyond the Nomex® insulation.

Nomex® insulation specifications

- 9.5 oz./yd.² (at least 0.11" (2.8 mm) thick)
- 1 ½" (38 mm) wide roll

3M™ Aluminum Foil Tape 425 or 427

- 2" (51 mm) wide roll

H.2. INSULATION INSTALLATION

Insulation is important to help protect the Corian® Solid Surface countertop and the underlying support structure from temperature extremes and reduce the effects of temperature fluctuations that exist in a food service application. Insulation is required for all hot and cold food wells and cook-top inserts. It is also important to try to keep the cabinet or casework temperature down to reduce the thermal loading on the countertop.

The number of layers of Nomex® insulation required for the installation depends on the distance between two adjacent cutouts and the temperature of each of these cutouts. Table H-1 provides guidance for the correct number of layers of Nomex® insulation that must be installed to adequately protect the Corian® Solid Surface.

TABLE H-1: NOMEX® INSULATION GUIDELINES

Cutout Spacing (edge to edge)	Same Temperature	Hot-Cold
More than 305 mm (12")	1 layer	1 layer
152-305 mm (6-12")	1 layer	2 layers
Less than 152 mm (6")	1 layer	3 layers

Attach the Nomex® insulation and aluminum tape as shown in Figure H-1. Wrap the first Nomex® insulation layer over the top and down the side of the food well support. The aluminum tape should be fastened to the support structure., do not fasten the tape to the countertop. Additional layers of Nomex® insulation should be placed over the vertical portion of the prior layers. Cover the Nomex® insulation completely with aluminum tape and allow excess aluminum tape to hang vertically and extend at least 6 mm (¼") beyond the Nomex® insulation.

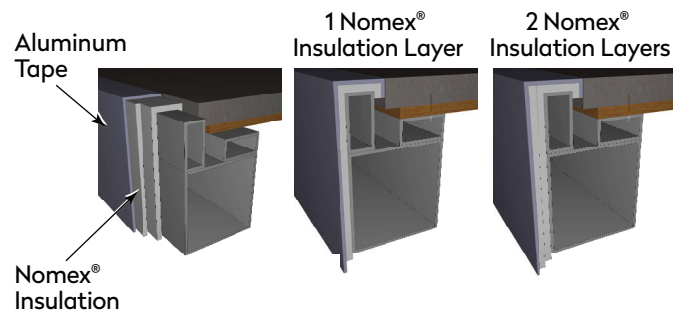


Figure H-1: Insulation Assembly

Do not locate seams in Nomex® insulation at corners where the stress is highest. Seams should be along the side of a cutout.

I. Clearances

Corian® Solid Surface expands and contracts when exposed to fluctuating temperatures. It is important to never restrict the thermal expansion and contraction movement by holding the material in place or by failing to provide an expansion gap between Corian® Solid Surface and any other dissimilar material.

Provide clearance between Corian® Solid Surface and any materials that could possibly restrain movement, like adjacent walls, support frames, and underlayment. The coefficient of thermal expansion for Corian® Solid Surface is 3.9 x 10⁻⁵ mm/mm °C (2.2 x 10⁻⁵ in./in. °F) Suggested clearances are:

- 3 mm (1/8") minimum perimeter or radial clearance for any penetration passing through the surface.
- 3 mm (1/8") minimum clearance between buildup edges and any support structure or underlayment.
- 1.5 mm (1/16") minimum clearance at all walls (gap may be filled with silicone sealant.)

These are minimum clearances. Longer runs of countertop or greater temperature changes may warrant larger clearances.

J. Cutout Support Examples

The following examples illustrate support with equipment load isolation (equipment does not rest on the countertop surface) as well as thermal isolation and insulation.

Figure J-1 through Figure J-5 illustrate cross sections of food well support structures made from tube steel, angle iron, and wood. The figures display the cross-section support through both the corner block as well as the underlayment between the corner blocks. Full perimeter support is required within 75 mm (3") of the cutout edges for all cutouts.

The drawings illustrate:

1. Mechanical isolation of equipment loads. While the equipment shares the same main support structure, the countertop and the food well are independently supported.
2. Thermal isolation of the countertop from the food well. The food well flange should not rest on the countertop. Caution: Do not allow aluminum foil tape to create a heat transfer path directly to the Corian® Solid Surface. This is to minimize the heat transfer to the Corian® Solid Surface.
3. Thermal insulation of the countertop and support structure with Nomex® insulation. This minimizes stresses due to thermal expansion or contraction.

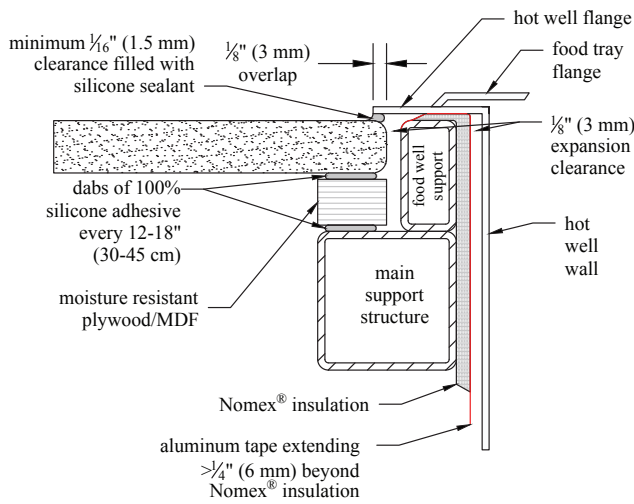


Figure J-1: Cutout Cross-Section View with Tube Steel Support at the High-Strength Corner

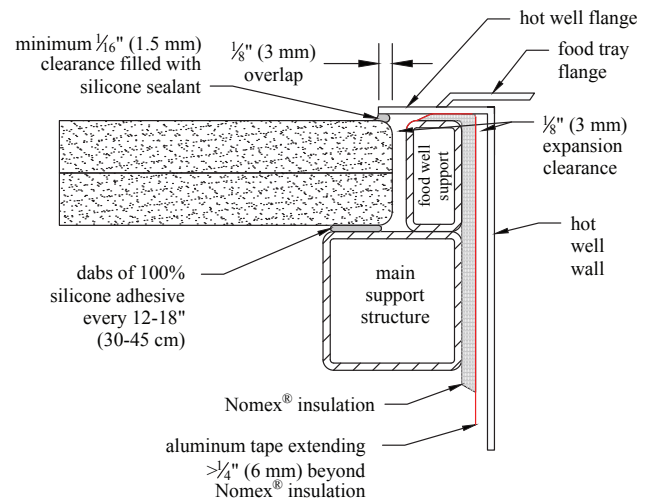


Figure J-2: Cutout Cross-Section View with Tube Steel Support at the Underlayment

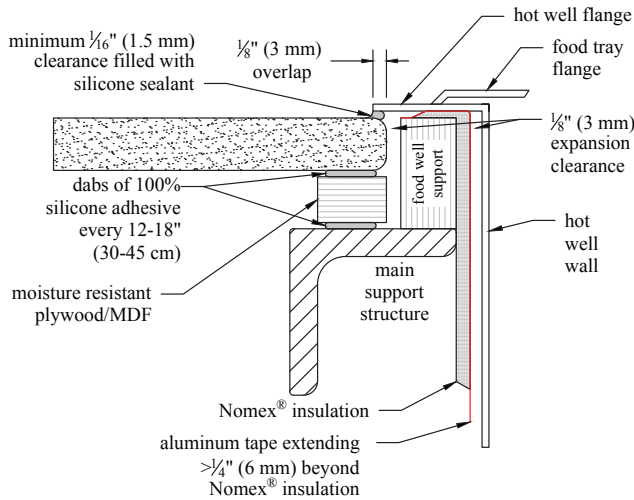


Figure J-3: Cutout Cross Section View with Angle Iron Support - High-Strength Corner Block

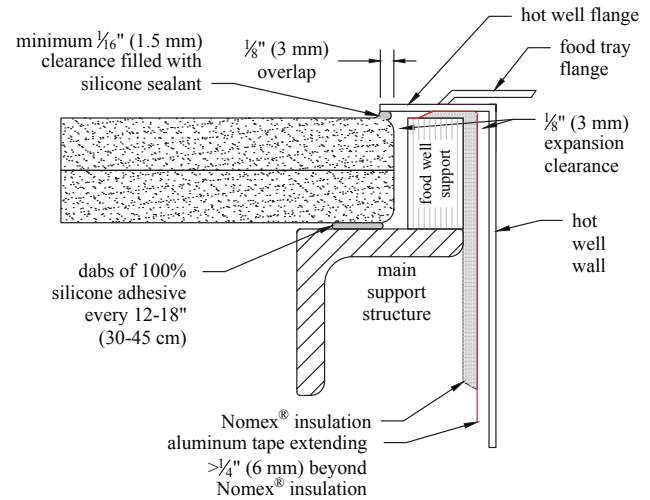


Figure J-4: Cutout Cross Section View with Angle Iron Support - Underlayment

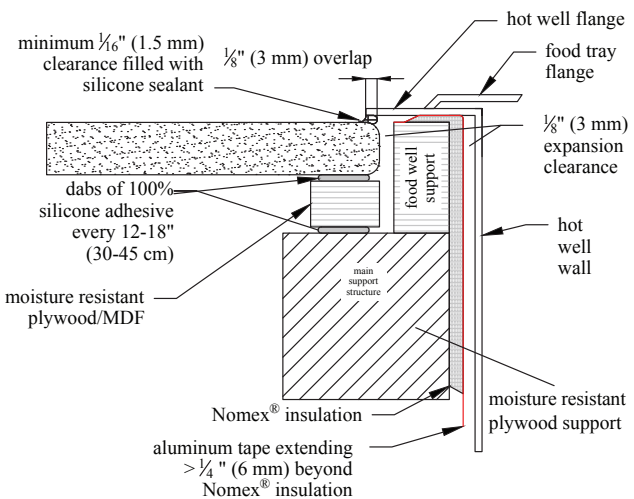


Figure J-5: Cutout Assembly Cross Section View with Wood Support - High-Strength Corner

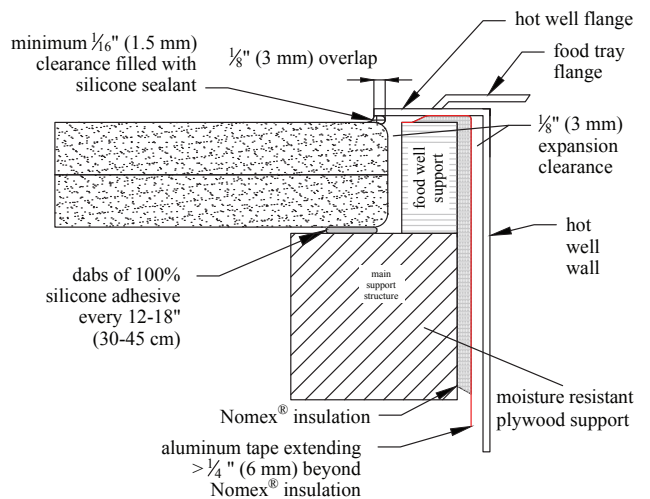


Figure J-6: Cutout Assembly Cross Section View with Wood Support - Underlayment



Figure J-7: Support Structure Example

K. Overhang Guidelines

Overhangs in food service applications must be supported properly. Use Table K 1: Overhang Support Types to determine the necessary support required for zero-load overhangs. If equipment or loads are going to be located on the overhang, additional support is required and must be incorporated into the design and installation.

This guidance mirrors that in K-25291 *Corian® Solid Surface Structural Support*. Please see that document for additional guidance.

TABLE K-1: OVERHANG SUPPORT TYPES

12 mm (1/2") Corian® Solid Surface Countertop	
Overhangs Extending	Suggested Support
0" to 6" (150 mm)	No additional support required for zero load
6" (152 mm) to 12" (305 mm)	Plywood Underlayment or Brackets or 1" Square Metal Tube Stock – follow span and load guidelines
12" (305 mm) to 18" (457 mm)	Plywood Underlayment and Brackets or 1" Square Metal Tube Stock – follow span and load guidelines
18" (457 mm) and over	Legs or Columns – follow span and load guidelines
19 mm (3/4") Corian® Solid Surface Countertop	
Overhangs Extending	Suggested Support
0" to 12" (305 mm)	No additional support required for zero load
12" (305 mm) to 18" (457 mm)	Plywood Underlayment and Brackets or 1" Square Metal Tube Stock – follow span and load guidelines
18" (457 mm) and over	Legs or Columns – follow span and load guidelines

L. Edge Treatments

Food service installations may be exposed to more frequent impact from carts or other equipment. Either protect edges from impact or use large radii profiles on edges that are more robust to impact.

L.1. INSIDE CORNER (L OR U-SHAPED COUNTERTOP)

Single section (e.g., L, U, etc.) shaped pieces are required to have a minimum radius of 13 mm (1/2") to reduce corner stresses. A larger radius will reduce stress and increase durability.

L.2. OUTSIDE CORNER

Outside corners are required to have a minimum radius of 1.5 mm (1/16") however 3 mm (1/8") or larger is recommended. Larger radii will provide additional impact resistance in heavy duty applications.

L.3. TOP AND BOTTOM EDGES

Ease all top and bottom edges of straight edge profiles to a minimum of 1.5 mm (1/16") radius or chamfer. Larger radii will provide additional impact resistance in heavy duty applications.

M. Seams

Seams may be used to extend the countertop beyond the dimensions of the sheet or to relieve stress due to temperature gradients. There are two types of seams, soft flexible seams or hard rigid seams.

M.1. SOFT SEAMS (EXPANSION JOINTS)

Soft seams are 3 mm (1/8") gaps between two sections filled with 100% silicone adhesive. Most designs require some soft seams to allow the countertop to expand and contract with temperature fluctuations. Soft seams are required between all adjacent hot and cold food wells to allow for expansion due to the temperature differential. It is also required that these adjacent wells of opposite temperatures be at least 305 mm (12") apart.

Soft seams may be covered with T-molding or custom Corian® Solid Surface molding if desired.

M.2. HARD SEAMS

A hard seam creates a rigid seam that, when sanded and finished properly, is inconspicuous to the eye (veined products will show visual break in pattern at seams). This seam is created by using Corian® Joint Adhesive to bond the two edges of the countertop deck together.

M.3. SEAM LOCATIONS

Seam location requirements (Figure M 1):

- Minimum 50 mm (2") from all deck and cutout edges
- Seams may be placed through a cutout if absolutely necessary but is not recommended. If the seam must be placed through a cutout, it is recommended to place the seam through the center of the cutout.
- Seams should be located over structural support. See M.4. Seam Reinforcement for additional details
- 38 mm (1-1/2") minimum offset from all inside corner radii (not in cutout)

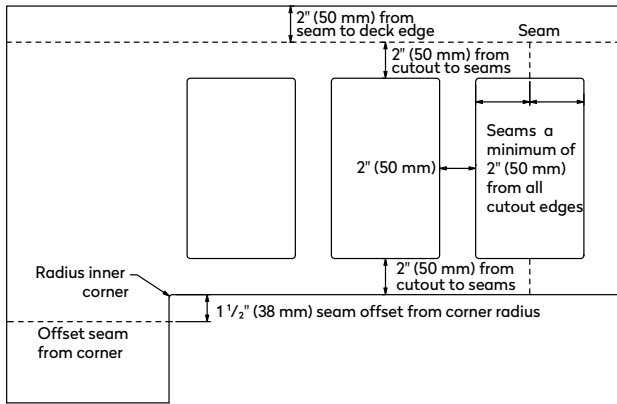


Figure M-1: Seam Location

M.4. SEAM REINFORCEMENT

M.4.1. Soft Seam Reinforcement

Secure support strips made of moisture resistant MDF or moisture resistant plywood (at least 19 mm (3/4") thick and 50 mm (2") wide) to the countertop with 100% silicone adhesive. Support reinforcement strips from main support frame by providing:

- Full front to back support (preferred) or cross supports every 305-460 mm (12" to 18") if full support is not possible. Short seams, less than 305 mm (12"), require only a cross support at the middle of the seam reinforcement strip.

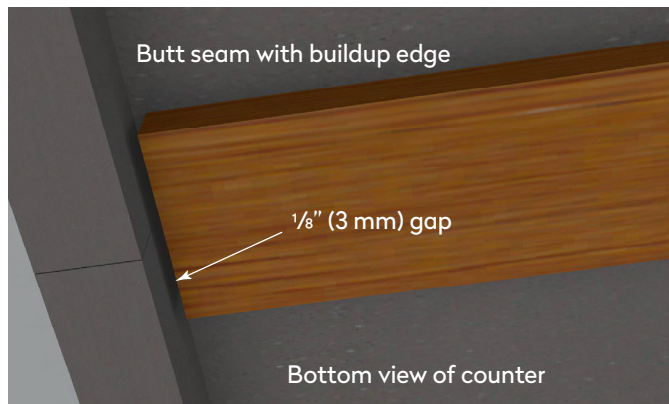


Figure M-2: Soft Seam (Expansion Joint) Support

M.4.2. Hard Seam Reinforcement

Solid surface seams require reinforcements with Corian® Solid Surface and support for food service installations involving cutouts and heavy equipment. This is an exception to the guidance in K-25292 *Corian® Solid Surface – Seaming* in which seams with Corian® Joint Adhesive do not require a Corian® Solid Surface reinforcement for general residential and commercial applications.

Hard Seam Reinforcement Requirements

Reinforcement strips for hard seams (as illustrated in Figure M 3 through Figure M 5) must be:

- 50 mm (2") wide and as thick as the countertop, made from the same or lighter color Corian® Solid Surface as the countertop to help eliminate potential shadowing.
- Attached to the bottom of both sides of the seam and the countertop buildup edge with Corian® Joint Adhesive covering all the surface.
- Supported from the main support frame with:
 - Full front to back support (preferred)
 - Cross supports every 305-460 mm (12" to 18") if full support is not possible.
 - Short seams, less than 305 mm (12"), require only a cross support at the middle of the seam reinforcement strip.

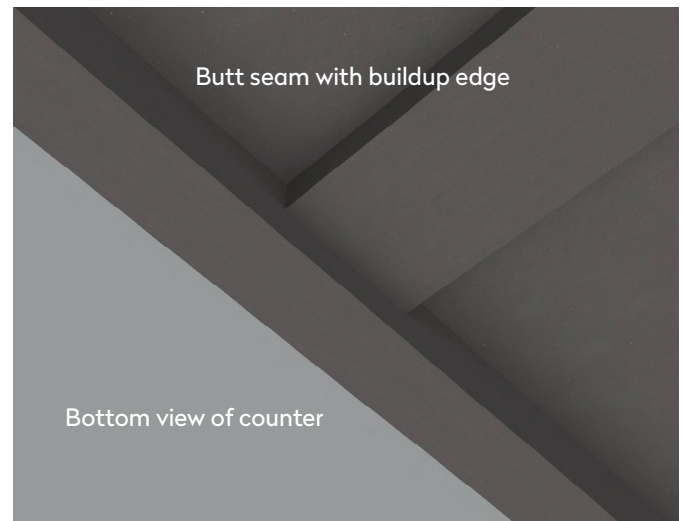


Figure M-3: Hard Seam Reinforcement Strip



Figure M-4: Hard Seam Reinforcement and Support

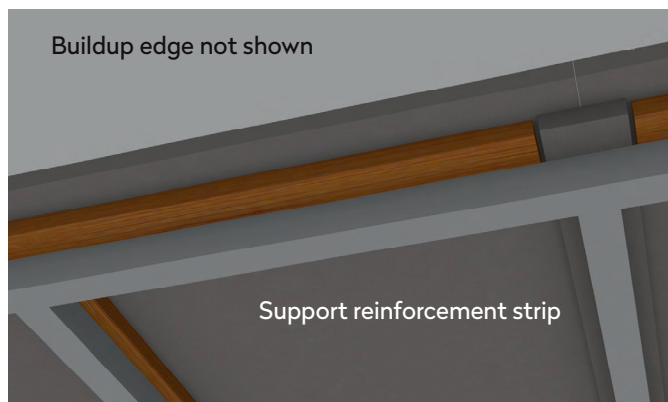


Figure M-5: Hard Seam Corian® Reinforcement Strips and Support

N. Transportation and Installation

Food service installations involve many cutouts. It is essential to properly support countertops during transportation and installation as stresses will be concentrated in sections with cutouts. In some situations, it may be better to add additional seams to reduce the size of segments and ease transportation and installation.

Avoid strapping that wraps around the top of a sheet. Having the strap wrap around the top of a taller A-frame will avoid having the straps apply stress to cutouts. Preferentially place straps where there are no cutouts.

Cutout carriers and lifting devices will assist with transport as will carts for the installation site. Always transport vertically on edge with cutouts at the top.

Additional guidance is available in K-25299 *Corian® Solid Surface Transportation and Installation*.

O. Installation

O.1. VERIFY SUPPORT STRUCTURE

Issues with the support structure can be a primary contributor to countertop failure. It is important to verify that the support structure meets the requirements and resolve any issues before installation of the countertop.

O.2. VERIFY INSULATION

Installing the insulation and aluminum tape will be easier before the countertop is installed. It is recommended to install and inspect installation before installing the countertop.

O.3. THE UNEXPECTED

Is there unexpected heating or cooling equipment such as ice pans, overhead lamps, strip heaters, surface heaters, etc.? These add-ons can create temperature conditions that may require special attention including additional insulation, hot pads, expansion joints, temperature isolation stainless steel collars, etc.

Were there any field changes to hole size or spacing, support locations, millwork integrity, equipment designs or capacities, etc., that might change either the temperature or stress patterns in the Corian® surface?

O.4. SECURING CORIAN® SOLID SURFACE TO THE SUPPORT FRAME

Secure Corian® Solid Surface to the support structure with 20 mm (0.75") dabs of silicone adhesive every 30-45 cm (12"-18").

O.5. MECHANICAL FASTENING

The primary method for fastening equipment such as sneeze guards, lighting, etc. should be the pass-through method, previously discussed in G.1.2. Pass Through Support. For non-load bearing, light duty requirements, mechanical fasteners may be used.

Corian® Solid Surface has special requirements when it comes to the types of fasteners used. Never mechanically fasten a screw, bolt, or nail directly to Corian® Solid Surface. The only acceptable ways to mechanically fasten to Corian® Solid Surface are:

- Plastic or brass threaded insert – Cut the required diameter and depth to slip fit the insert in the sheet and then secure the insert with Corian® Joint Adhesive. The Squirrel® Fixing System is an acceptable example of a plastic threaded insert.
- Waffle style – Secure a waffle style fastener, such as Rotaloc® fasteners, to the Corian® Solid Surface with Corian® Joint Adhesive.

P. Additional Design Elements

P.1. HEAT LAMPS

Heat lamps can generate extremely high surface temperatures. They are designed to heat items on top of a surface and should never be used to heat a Corian® surface. Make sure they are fixed in the proper position and can't be moved. If heat lamps are used, the Corian® surface must not be restrained from expansion and contraction. Clearances must be left between the Corian® surface and any potential restraints, including walls, penetrations, etc. Most health authorities require food to be kept at a temperature of at least 60°C (140°F) but be aware of local requirements. The distance between the lamp and the Corian® surface will depend on lamp characteristics. The distance should be determined to achieve food temperature requirements and minimize hot spot creation on the Corian® surface. Placement should be optimized so the heat lamps are focused on the food only. Typically heat lamps should be at least 508 mm (20") above the Corian® surface unless actual field measurements prove that a lower position will not heat the surrounding Corian® surface in above 66°C (150°F) Do not place seams in areas under heat lamps. Heat lamps should be supported by the pass-through method (G.1.2. Pass Through Support).

If heating a location where plates of food are placed momentarily then this area is best designed with:

- No penetrations, inside corners, and other stress risers
- Soft silicone seams separating this section from adjoining areas
- Consider providing trivets or install hot pad rods

Note: Do not allow the temperature of the surface to exceed 66° C (150° F).

P.2. SNEEZE GUARDS

As with heat lamps, sneeze guards should be mounted by the pass-through support method (G.1.2. Pass Through Support) to allow the Corian® Solid Surface to expand and contract. Seal the gaps with silicone sealant to allow expansion and contraction.

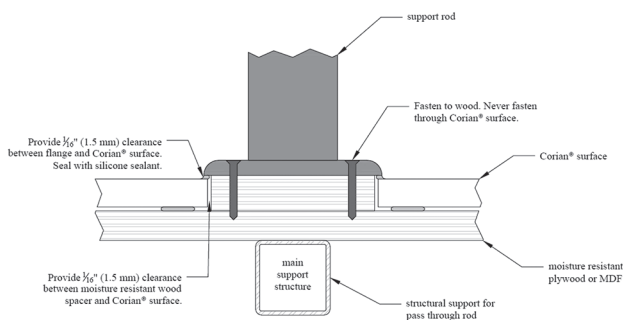


Figure P-1: Typical Sneeze Guard Assembly

P.3. HOT PADS/TRAY SLIDES

If desired, steel rods ("hot rods") may be installed to prevent hot food pots from resting directly on the Corian® Solid Surface. See Figure P-2 for details.

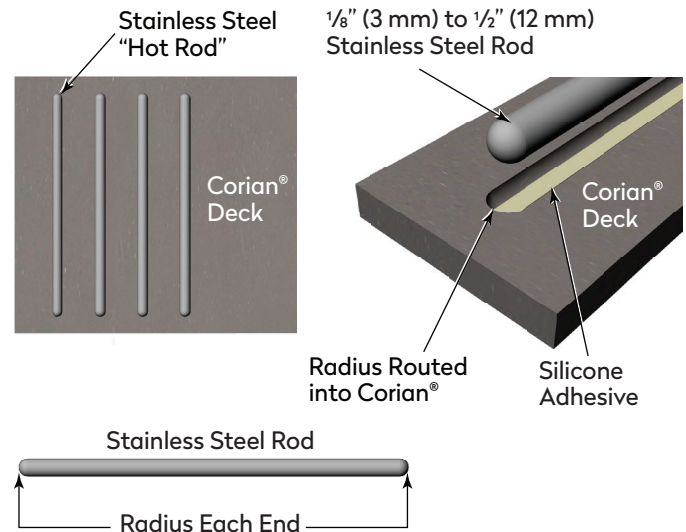


Figure P-2: Hot Pad Assembly/Tray Slides

Trays are often made with mineral or glass fillers that can be very abrasive. Tray slides can be made of the same or a complementing Corian® Solid Surface color or metal (stainless steel rods, brass strips, etc.). The Corian® Solid Surface is typically routed so that the bottom side of the slides fit into the surface and the top sides protrude to facilitate sliding. Slides are to be adhered with flexible silicone adhesive so they can expand/contract as needed. Examples are shown in Figure P-3 and Figure P-4

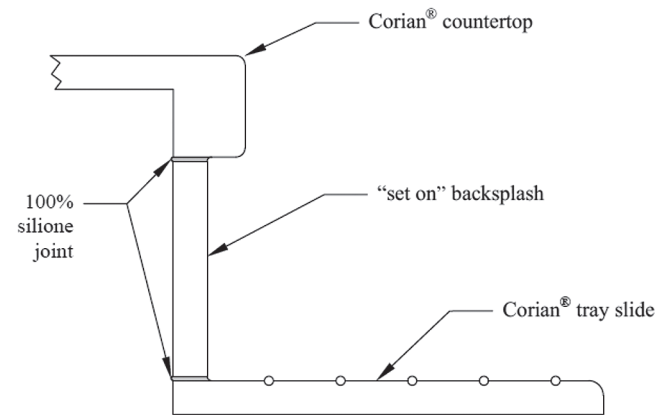


Figure P-3: Tray Slide with Set-On Backsplash

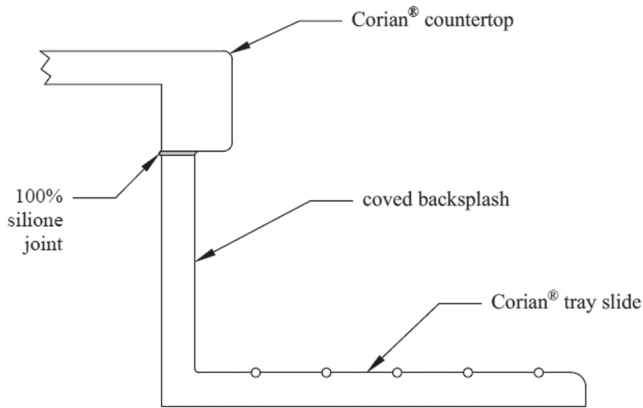


Figure P-4: Tray Slide with Coved Backsplash

P.4. STAINLESS STEEL ADAPTER

Not all food service equipment will come with a flange that will cover the required support structure. An adapter may be fabricated from 14–16-gauge stainless steel. This flange should be a minimum of 25 mm (1") wide.

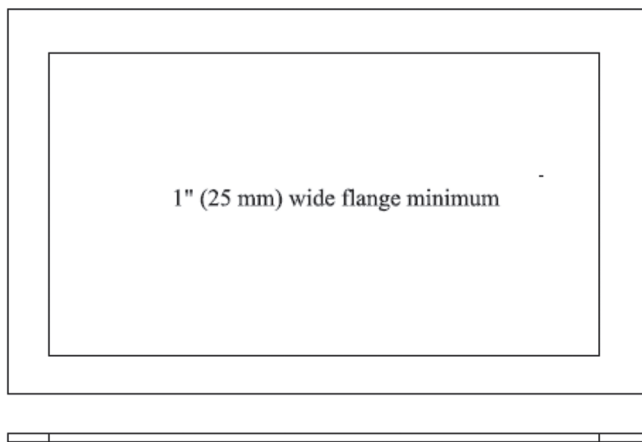


Figure P-5: Stainless Steel Adapter

P.5. OTHER DESIGN CONSIDERATIONS

Corian® Solid Surface is a beautiful material that has been used for many beautiful designs. The following guidelines will enhance design success and durability.

1. Avoid stress risers such as square inside corners and abrupt changes in thickness or width of the Corian® Solid Surface assembly.
2. Avoid direct contact between Corian® Solid Surface and hot water or steam. Never under mount hot wells, which cause the Corian® top to become part of the steam tray assembly.
3. Always allow for expansion and contraction. Ensure that overhanging or drop edges have 3 mm (1/8") minimum clearance to underlayment or other materials. This will allow expansion and contraction if it is stored in cold weather or if the metal casework expands faster than the Corian® Solid Surface. Provide 3 mm (1/8") clearance between the Corian® Solid Surface and columns or brackets penetrating through the surface. Clearances can be filled with silicone if desired.

Q. Cabinet Ventilation

If a cabinet containing a heating element is closed on all sides, ventilation is necessary to reduce the temperature inside the support cabinet. Convection and forced air cooling are two acceptable types of ventilation. Convection cooling is done by placing vents at the top of one side and the bottom of the opposite side to promote airflow. Forced air cooling is done by installing a fan in the cabinet and installing vents at the top of the cabinet. Fans should be tied into the heating power source, so they turn on automatically when the heat source is on.

Ventilation may also be indicated for cold wells to help prevent condensation buildup.

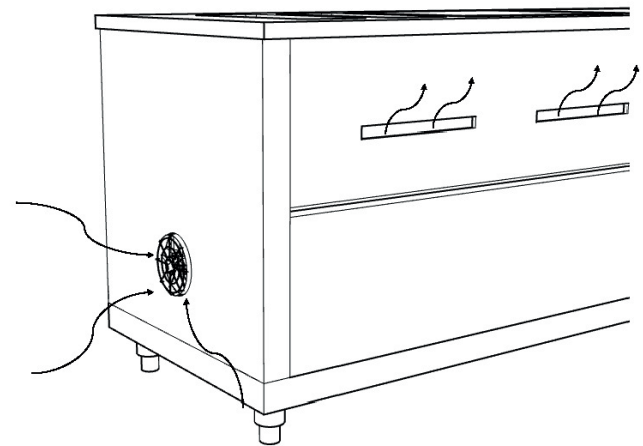


Figure Q-1: Convection Cooling

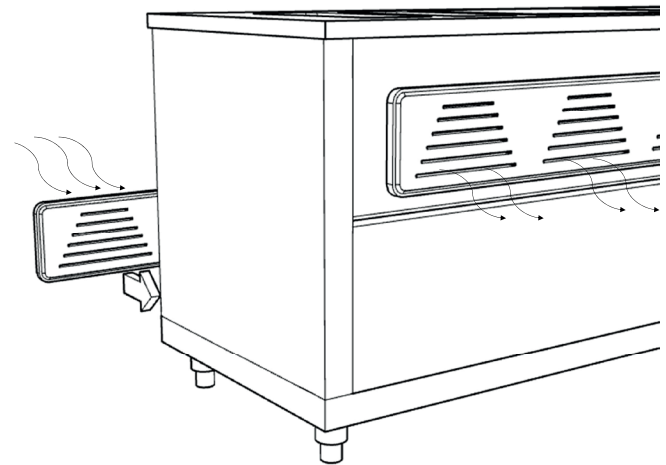


Figure Q-2: Forced Air Cooling

R. Additional Resources

In addition to resources cited in this bulletin, the Corian® Solid Surface Fabrication/Installation Fundamentals series of bulletins provides basic fabrication guidance. These are available from <https://www.corian.com/documentation> as a downloadable compressed zip file *Corian® Fabrication Manual*.

K-26829 *Corian® Solid Surface Performance Properties* provides mechanical and thermal properties for Corian® Solid Surface.

S. NSF/ANSI 51

Corian® Solid Surface sheets are NSF/ANSI 51 Certified to the highest level, for food zone, for all food types. Please see K 30196 *Corian® Solid Surface NSF/ANSI 51 Certification* for additional details.

T. Kosher Certification

The manufacturing procedures and raw materials used in the production of Corian® Solid Surface have been reviewed by the kosher certification agency, Star-K. These surfaces are certified kosher and approved for use in kosher homes. If they were used previously for non-Kosher uses, or for use on Passover, one should consult a rabbinical authority. Product listing can be found at www.star-k.org. For additional information please see K-30051 *Corian® Solid Surface Kosher Certification*.

U. Customer Instructions

Discuss equipment settings and usage with the customer.

Corian® solid surface temperatures should never exceed 66°C (150°F). Food temperatures are generally higher at 71-77°C (160-170°F).

Steam trays that dry out can overheat, becoming too high in temperature.

If the appliances have positive stops, set a maximum temperature.

Make sure they understand not to lower the heat lamps from the proper settings. Moving the lamps closer can make the temperature exceed the design limits.

Provide a printed copy or direct customer to download K-29810 *Corian® Solid Surface Care and Maintenance for Facility Managers* from Corian.com.

V. Referenced Documents

K-25283 *Corian Solid Surface Safety Recommendations*

K-25291 *Corian® Solid Surface Structural Support*

K-25292 *Corian® Solid Surface – Seaming*

K-25299 *Corian® Solid Surface Transportation and Installation*

K-26829 *Corian® Solid Surface Performance Properties*

K 30196 *Corian® Solid Surface NSF/ANSI 51 Certification*

K-30051 *Corian® Solid Surface Kosher Certification*.

W. Appendix – Measurement Reference Tables

W.1. CUTOUT PARAMETERS

Topic	Guidance	Reference
Inside Corner Radius (Ambient)	5 mm (³ / ₁₆ " minimum. Use as large as equipment allows.	F.1 Standard Cutouts
Inside Corner Radius (Hot/Cold)	5 mm (³ / ₁₆ " minimum. Use as large as equipment allows. High Strength Cutout required except circular cutouts	F.2 Hot and Cold Food Wells
Top & Bottom Edge Radii	3 mm (¹ / ₈ "	F.1 Standard Cutouts
Cutout Finish	150-grit or finer sandpaper	F.1 Standard Cutouts

W.2. CUTOUT SPACING

Topic	Guidance	Reference
Distance between cutouts of same temperature	50 mm (2")	F.4 Cutout Spacing
Distance between hot and cold cutouts	305 mm (12") distance and flexible soft silicone seam between all adjacent hot and cold food wells to allow for the temperature differential	F.4 Cutout Spacing
Distance between cutout and countertop edge	50 mm (2")	F.4 Cutout Spacing
Distance between cutout and seam	50 mm (2")	F.4 Cutout Spacing
Distance between seam in cutout-to-cutout edge	50 mm (2"), putting a seam in a cutout is discouraged. If seam is necessary, it needs to be away from corners.	M.3 Seam Locations

W.3. CUTOUT GAPS AND MISCELLANEOUS SPACING

Topic	Guidance	Reference
Standard Cutout	3 mm (1/8") clearance between the food well support and both the countertop and countertop support edge, including at corners	F.1. Standard Cutouts
Hot/Cold Cutout	3 mm (1/8") clearance between the food well support and both the countertop and countertop support edge, including at corners	F.2. Hot and Cold Food Wells
Hot/Cold Cutout	3 mm (1/8") expansion clearance for the entire perimeter of the food well equipment (distance between food well equipment and insulation)	F.2. Hot and Cold Food Wells
Hot/Cold Cutout	3 mm (1/8") nominal overlap of the food well flange over the countertop	F.2. Hot and Cold Food Wells
Hot/Cold Cutout	1.5 mm (1/16") vertical clearance between the food well flange and the countertop surface which is to be filled with silicone sealant	F.2. Hot and Cold Food Wells
Clearances	3 mm (1/8") minimum perimeter or radial clearance for any penetration passing through the surface.	I. Clearances
Clearances	3 mm (1/8") minimum clearance between buildup edges and any support structure or underlayment.	I. Clearances
Clearances	1.5 mm (1/16") minimum clearance at all walls (gap may be filled with silicone sealant.)	I. Clearances

W.4. SEAM LOCATIONS AND TYPES

Topic	Guidance	Reference
Distance between seam to cutout	50 mm (2")	M.3 Seam Locations
Distance between seam to countertop edge	50 mm (2")	M.3 Seam Locations
Offset of seam from inside corner (non-cutout)	38 mm (1 1/2") for inside corners joining two sections of countertop	M.3 Seam Locations
Distance between seam in cutout-to-cutout edge	50 mm (2"), putting a seam in a cutout is discouraged. If seam is necessary, it needs to be away from corners.	M.3 Seam Locations
Flexible seams between hot and cold cutouts	Flexible silicone seam recommended between hot and cold cutouts	F.4 Cutout Spacing

W.5. CUTOUT INSULATION

Topic	Guidance	Reference
More than 305 mm (12") – Same Temp	1 layer of Nomex® Insulation and Aluminum Tape	Table H-1: Nomex® Insulation Guidelines
More than 305 mm (12") – Hot/Cold	1 layer of Nomex® Insulation and Aluminum Tape	Table H-1: Nomex® Insulation Guidelines
152-305 mm (6-12") – Same Temp	1 layer of Nomex® Insulation and Aluminum Tape	Table H-1: Nomex® Insulation Guidelines
152-305 mm (6-12") – Hot/Cold	2 layers of Nomex® Insulation and Aluminum Tape	Table H-1: Nomex® Insulation Guidelines
152-305 mm (6-12") – Same Temp	1 layer of Nomex® Insulation and Aluminum Tape	Table H-1: Nomex® Insulation Guidelines
152-305 mm (6-12") – Hot/Cold	3 layers of Nomex® Insulation and Aluminum Tape	Table H-1: Nomex® Insulation Guidelines

X. Appendix – Checklists

X.1. SAFETY

- | | | | |
|------------------------------|-----------------------------|-----------------------------|--|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Safety glasses |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Ear protection |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Leather gloves |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Dust mask |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Hard hat when required |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Steel-toed work boots |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Chemical resistant gloves |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Trained on tools |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Attend job site safety meeting if required |

X.2. DESIGN

- | | | | |
|------------------------------|-----------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Does the sheet color require specific orientations (Veined/Metallic/Mica)? See K-26833 <i>Corian® Solid Surface Directional Aesthetics</i> for list of colors |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Equipment separately supported from sheet? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Overhead equipment used proper pass-through support? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Proper separation of cutouts of (same temperature, edges)? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Dedicated structural support for any equipment to be on surface? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Hot pads where hot pans/plates are likely? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Hot pads under heat lamps (pass throughs) |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Tray slides installed? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Wear plate installed behind tray slide? |

X.3. QUOTING

- | | | | |
|------------------------------|-----------------------------|-----------------------------|--|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Does the sheet color require specific orientations (Veined/Metallic) and have you accounted for extra sheet required in your quote? See K-26833 <i>Corian® Solid Surface Directional Aesthetics</i> for list of colors |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Are there site-specific details (work rules, access, etc.) that will impact timing and cost? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Are you bidding per plan and specification? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | If you are responsible for the support structure, have you included all necessary support in your costs? |

X.4. PRE-JOB

- | | | | |
|------------------------------|-----------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Have you considered if the job is better done on-site/in the shop/combined? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Are you in a region that prohibits the use of denatured alcohol for cleaning? (Substitute acetone if air quality regulations prohibit alcohol) |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Do you have the right colors of Corian® Joint Adhesive? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Do you have the right colors of sealant? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Can you stage material on-site? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Do you have access to power? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Do you have access to compressed air? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Will the site be climate controlled? |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Do you know the site rules? (Access, noise, dust, deliveries, hours, etc.?) |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Are you doing the whole job from support to turnover? If not, who is responsible for the other portions and how will you ensure they do their part correctly? |

X.5. SUPPLIES

- | | | | |
|------------------------------|-----------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Color matched Corian® Joint Adhesive for hard seams |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Color coordinated sealant for finish caulking |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Clear 100% silicone adhesive |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Painter's tape |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Clear packing tape |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Denatured alcohol (Acetone) |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Clean white rags or paper towels |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Hot melt glue gun and glue sticks |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Plywood for ledger |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | 1/16" (1.5 mm) Shims |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | 1/8" (3 mm) Shims |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Sandpaper (sequence) |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | 3M™ ScotchBrite™ Clean Sanding Discs |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Nomex® Insulation |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | 3M™ Aluminum Tape |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Double sided tape |

X.6. EQUIPMENT

- | | | | |
|------------------------------|-----------------------------|-----------------------------|---|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Seam adhesive dispenser |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Caulk gun |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Vacuum clamps |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Spring clamps |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Squeeze or screw type clamps |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Wooden blocks |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Tape measure |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Level 4' (1.22 m) or longer or laser level |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Straight edge |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Sharp chisel with rounded corners |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Scribe |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Block plane |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Sander |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Work light |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Sawhorses |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Ladder |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Drywall cart for transporting material on larger scale jobs |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | 4'x8' sheet of 3/4" plywood for work bench |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Glazer's suction cups |
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> NA | Plastic spray bottle |

X.7. FABRICATION

- Yes No NA Are all sheets inspected for defects?
- Yes No NA Are sheets sequenced for optimum color match?
- Yes No NA Do you have adequate dust control for on-site fabrication?
- Yes No NA Do all sheets have a uniform finish?
- Yes No NA Are all prefabricated pieces labeled for easy identification during delivery and on-site?
- Yes No NA Do all cutouts have a minimum inside radius of $\frac{3}{16}$ " (5mm)?
- Yes No NA Do all cutouts have a high strength design (except exempt cutouts)?

X.8. INSTALLATION

- Yes No NA Inspect support condition (correct support dry, flat)
- Yes No NA Substrate cleaned with denatured alcohol (Acetone)?
- Yes No NA Sheet back cleaned with denatured alcohol (Acetone)?
- Yes No NA Sheet edges cleaned with denatured alcohol (Acetone)?
- Yes No NA Is there any unexpected heating or cooling equipment (ice pans, overhead lamps, strip heaters, surface heaters, cooking stations, etc.? Design changes may be required.
- Yes No NA Check for field changes to holes sizes or spacings, support locations, millwork integrity, equipment designs or capacities that may change temperature or stress patterns.
- Yes No NA Check flat surfaces. Are they located where they may be a convenient place to put trays "just out of the oven"? Consider adding trivets or hot rods.
- Yes No NA Are there surfaces that are likely to have someone stand on the countertop to reach lighting, signage, cabinets, or as a "shortcut"? Is the support adequate?
- Yes No NA Is all equipment in cutouts independently supported?
- Yes No NA Are all seams properly supported?
- Yes No NA Could the support structure support all the equipment without the Corian® Solid Surface installed?

X.9. INSPECTION

- Yes No NA Do all cutouts have a minimum inside radius of $\frac{3}{16}$ " (5 mm)?
- Yes No NA Have all cutout edges been sanded smooth?
- Yes No NA Soft seam quality checked?
- Yes No NA Hard seam quality checked?
- Yes No NA Finish quality checked?
- Yes No NA Are gaps between tops and walls, etc. filled with silicone sealant.
- Yes No NA Do all cutouts have high strength cutouts where required?
- Yes No NA Are all hot and cold cutouts insulated? With the proper # of layers?
- Yes No NA Is all equipment properly supported?
- Yes No NA Are all seams reinforced and completely filled?
- Yes No NA Are all edge buildups completely filled? Do all edge inlays match up?
- Yes No NA Is there adequate clearance between the Corian® solid surface top and all other parts to allow for expansion and contraction?
- Yes No NA Did you install the sneeze guards, overhead lamps, brackets, etc.? If not, have you provided adequate instructions, so they are properly installed without damaging the top?
- Yes No NA Do all of the heating pan temperature-control knobs have positive stops to prevent setting the temperatures too high? Food temperatures should be 160°F-170°F (71°C-76°C) to meet most health department requirements. Dry wells or heating units set to excessive temperatures will overheat the Corian® countertop, resulting in cracking failures.

CORIAN® SOLID SURFACE HOT/COLD FOOD SERVICE

PLEASE VISIT OUR WEB SITE: CORIAN.COM OR CONTACT YOUR CORIAN® REPRESENTATIVE FOR MORE INFORMATION ABOUT CORIAN® SOLID SURFACE..

This information is based on technical data that DuPont Specialty Products USA, LLC and its affiliates ("DuPont") believe to be reliable, and is intended for use by persons having technical skill and at their own discretion and risk. DuPont cannot and does not warrant that this information is absolutely current or accurate, although every effort is made to ensure that it is kept as current and accurate as possible. Because conditions of use are outside DuPont's control, DuPont makes no representations or warranties, express or implied, with respect to the information, or any part thereof, including any warranties of title, non-infringement of copyright or patent rights of others, merchantability, or fitness or suitability for any purpose and assumes no liability or responsibility for the accuracy, completeness, or usefulness of any information. This information should not be relied upon to create specifications, designs, or installation guidelines. The persons responsible for the use and handling of the product are responsible for ensuring the design, fabrication, or installation methods and process present no health or safety hazards. Do not attempt to perform specification, design, fabrication, or installation work without proper training or without the proper personal protection equipment. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents. DuPont shall have no liability for the use of or results obtained from such information, whether or not based on DuPont's negligence. DuPont shall not be liable for (i) any damages, including claims relating to the specification, design, fabrication, installation, or combination of this product with any other product(s), and (ii) special, direct, indirect or consequential damages. DuPont reserves the right to make changes to this information and to this disclaimer. DuPont encourages you to review this information and this disclaimer periodically for any updates or changes. Your continued access or use of this information shall be deemed your acceptance of this disclaimer and any changes and the reasonableness of these standards for notice of changes.

The Corian® Solid Surface Logo and Corian® and all trademarks and service marks denoted with ™, ® or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted. © 2022 DuPont.