

CUTTING AND CUTOUTS

INTRODUCTION

This bulletin discusses cutting and the creation of cutouts during fabrication of DuPont™ Corian® brand solid surface. These cutouts are for room temperature applications only. High temperature applications require specific fabrication techniques.

OVERVIEW

Proper placement and fabrication of seams will impact the cost of fabrication and the quality of the installation. Proper cutouts and cutout support structures are essential.

A. CUTTING LIST

It is important to examine each cut and seam considering design, support requirements and sheet yield. A comprehensive cutting list is essential to cost-effective fabrication of Corian® solid surface. From job templates or job drawings, calculate the best yield with seam placement and installation in mind.

Steps to completion:

1. Get job drawings from office.
2. From plan drawings, determine the quantity of raw sheet and shape material required, including all individual pieces. Don't forget to allow for saw cuts and a minimum $\frac{1}{8}$ " (3 mm) total gap for expansion.
3. Draw diagrams of the sheets to scale, and draw on the diagram all parts required to fabricate the planned job.
4. Clearly number all parts and transfer these numbers back to the plan for cross-reference.

HELPFUL HINTS:

Handle work in progress with extreme care to ensure no breakage occurs. Corian® solid surface is more susceptible to damage when it is partially fabricated without full support.

B. CUTOUT TEMPLATES

The use of an accurate template is one of the most essential elements to the successful fabrication of a cutout in Corian® solid surface. More information on template materials and manufacture can be found in *DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Site Preparation and Templating* (K-25287).

Complete the construction of a cutout template using standard good carpentry practice, it is important that the templates do not shrink, deflect or warp, but instead provide a true and long-lasting tool.

The minimum inside corner radius for all cutouts in Corian® solid surface is $\frac{3}{16}$ " (5 mm).

Cutout templates can be made by using the following methods. All methods require the use of a $\frac{3}{8}$ " (10 mm) or $\frac{1}{2}$ " (13 mm) router bit and a 1" (25 mm) template guide. Be sure that template material is thicker than the template guide.

C. MAKING CUTOUT TEMPLATES

Seamed Undermount Bowls

Steps to Completion:

1. Select template material and cut to size.
 2. Wrap upper edge of inside of bowl with two layers of masking tape. Make sure that the tape is laying flat with no wrinkles. Use hot-melt glue on flange of sink to fasten sink to template material.
 3. Carefully drill a hole away from the flange towards the center of the sink.
- Caution: Do not drill into the bowl flange.**
4. Install a flush-cut laminate trimmer bit in a router, and set depth so that the roller bearing is about $\frac{1}{32}$ " (0.8 mm) below the bottom of the template material.
 5. Carefully rout around the inside of the bowl.
 6. Spray denatured alcohol¹ on the hot-melt glue to loosen it, and separate bowl and template. Be sure to remove all hot-melt glue from bowl flange.
 7. Sand around inside of cutout to remove splinters and the ease edges of opening.
 8. Mark template with bowl model and manufacturer.

¹Denatured alcohol is the preferred solvent for cleaning DuPont™ Corian® solid surface products. Acetone is approved for cleaning DuPont™ Corian® solid surface in regions where denatured alcohol is prohibited. Please see *DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Approved Cleaning Solvents* (K-25701) for more details.

CUTTING AND CUTOUTS

Making a hard template from a paper pattern

This procedure works best using a $\frac{3}{8}$ " (10 mm) bit and 1" (25 mm) template guide.

1. Locate paper template, $\frac{3}{8}$ " (10 mm) router bit and 1" (25 mm) template guide.
2. Locate solid line on paper template representing the shape and size of the cutout opening.
3. Set a compass to $\frac{3}{8}$ " (10 mm), the diameter of the router bit. Scribe a line around the inside of the solid black cutout opening line of the paper template.
4. Use scissors or a sharp construction knife to carefully cut paper template on the scribed line. Save the inside piece.
5. Carefully trace the shape of inside paper piece onto a piece of plywood.
6. Use a saber saw to cut out the shape. Stay just outside of the line.
7. Sand the plug back to the line. Make plug as smooth and perfectly shaped as possible.
8. Mark plug for bowl model, manufacturer, bit and template guide size.
9. Select material for the template and cut to size.
10. Place template material on sturdy supports and clamp securely.
11. Center plug on template material, and screw through plug and template material into supports underneath.
12. Use a router equipped with a $\frac{3}{8}$ " (10 mm) bit and 1" (25 mm) template guide to carefully rout around the outside of the plug. Remember to go left to right (counterclockwise) around plug.
13. Sand template smooth to remove splinters and to ease edges of opening.
14. Mark template for bowl model, manufacturer, bit and template guide size.
15. Set plug aside to remake template when needed.

D. MAKING CUTOUTS

Cutouts in DuPont™ Corian® solid surface are best done in the shop, where the fabricator has the best working conditions. Sometimes cutouts must be made on the job, but this is the least desirable way due to dust considerations.

A third alternative is to make a “partial cutout” (See Figure D-1) in the shop to leave most of the dust in the shop. The top is then transported to the job where the installer completes the cutout.

Steps to Completion:

1. Select the proper cutout template and clamp securely on countertop.
2. Rout an elongated “C” around the inside of the template along the back and front of the countertop.
3. Wrap the “C” up each side of the cutout about 3" (76 mm) to 4" (102 mm), or out far enough to clear any obstacles on the job.
4. Leave the center intact for added strength during transportation.



Figure D-1

A sheet with cutouts needs special care during handling and transportation. See *DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Transportation and Installation* (K-25299) for more details.

E. HIGH-STRENGTH CUTOUTS

DuPont requires that heat-generating appliances have high-strength cutouts. This technique is the best way known to avoid cracking around heat generating appliances. Due to the differences in equipment and usage the guidance is different for residential and commercial use. Contact your authorized distributor of DuPont™ Corian® solid surface for additional guidance.

F. REFERENCED DOCUMENTS

DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Site Preparation and Templating (K-25287)

DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Transportation and Installation (K-25299)

DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Approved Cleaning Solvents (K-25701)

CUTTING AND CUTOUTS

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