



THERMOFORMED COVERED BACKSPLASH

INTRODUCTION

This bulletin addresses fabrication of a thermoformed DuPont™ Corian® solid surface covered backsplash. This method is particularly useful for products with directional aesthetics as listed in *DuPont™ Corian® Solid Surface Product Fabrication – Directional Aesthetics* (K-26833). The thermoformed cove avoids the disruption of visual appearance seen in these products with traditional coving methods.

OVERVIEW

Coved backsplashes are both aesthetically appealing and enhance ease of cleaning. This Technical Bulletin describes recommended fabrication techniques that can be used to create a thermoformed cove backsplash. By thermoforming the cove there is a visual continuity in aesthetics from the countertop deck, through the cove, to the backsplash. This allows fabricating coved backsplashes in directional aesthetic products that might have visual breaks in visual appearance with traditional backsplash fabrication techniques. As the cove is a much smaller radius than what may be achieved by thermoforming $\frac{1}{2}$ " (12 mm) sheet, the thickness must be reduced by rebating the area behind the cove. This rebated area is then reinforced after thermoforming. This bulletin focuses on the aspects of fabrication unique to this application. For background information please read the referenced documents. Some options presented can be labor intensive and it is important to price appropriately.

A. SPECIAL TOOLS

- Dishing bit or straight bit
- Ball end bit - $\frac{1}{2}$ " (12.7 mm) radius
- Roundover bit - $\frac{1}{4}$ " (6.3 mm) radius
- A thermoforming mold, often constructed of MDF for lower volume construction, is required.

B. REBATING BEHIND THE COVE

Cut the blank to slightly greater than required length. Optionally the edges may be beveled for the addition of end caps later. Recognize that there may be a slight change in net dimensions during thermoforming and a final trim cut may be required to achieve dimensional tolerances and provide straight edges/bevels.

The rebate is $1\frac{1}{8}$ " (28.6 mm) across and is located $2\frac{7}{8}$ " (73 mm) from the location of the top of the backsplash after final trimming. The edges of the cove have a $\frac{1}{4}$ " (6.4 mm) radius and the flat section is 0.590" (15 mm) wide with a remaining material thickness of 0.150" (3.8 mm).

Once blank is routed handle with care. The rebated section will be fragile until it is reinforced after thermoforming.

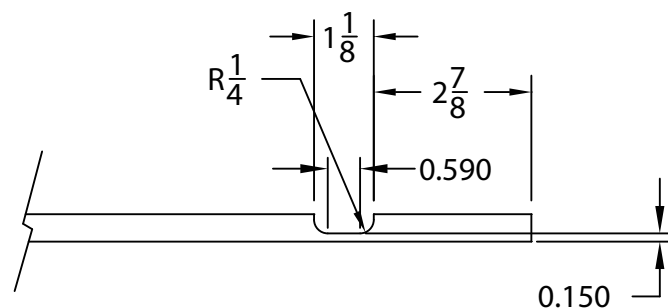


Figure B-1: Rebating Back of Cove (Sheet is Face Side Down)

C. THERMOFORMING

The rebated blank is formed face down over a mold with a $\frac{3}{8}$ " radius. The mold also includes a locating strip for the top of the backsplash. This helps ensure proper location of the cove. If using vacuum forming the mold shown below should have some vertical ribs for support. For more details on molds and thermoforming please read *DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Thermoforming* (K-25297).

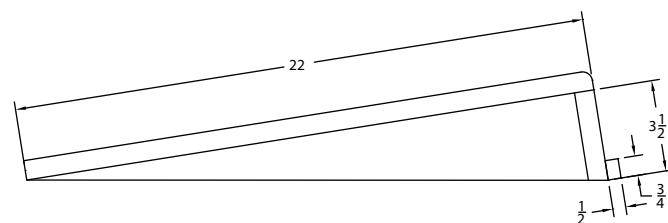


Figure C-1: Thermoforming mold

THERMOFORMED COVERED BACKSPLASH

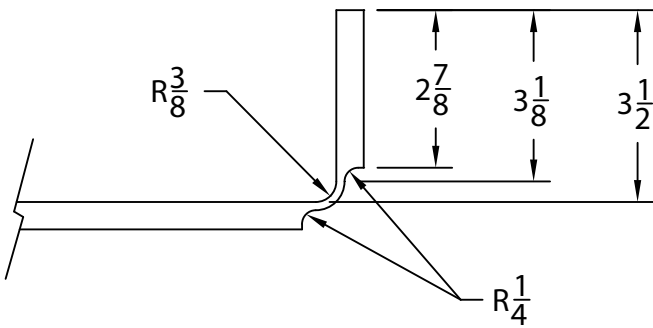


Figure C-2: Thermoformed Blank

D. COVE REINFORCEMENT

The cove support is fabricated by laminating with DuPont™ Joint Adhesive two Corian® strips cut 2 1/8" (54 mm) wide by the length of the top. A concave radius is cut with a 1/2" (12.7 mm) radius ball end bit and then the top and bottom edges of that cut are rounded with a 1/4" (6.3 mm) convex radius with a 1/4" roundover bit.

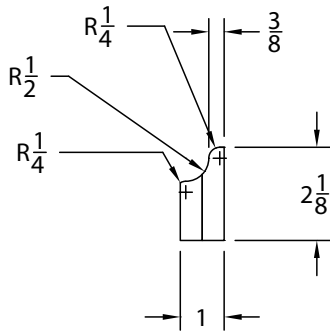
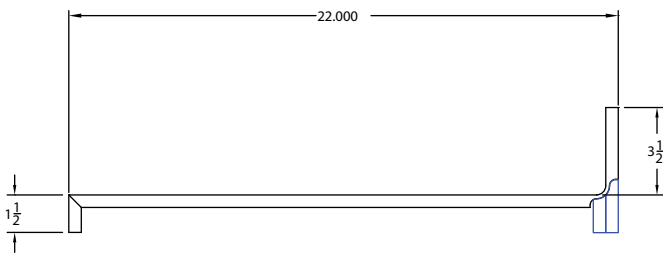


Figure D-1: Cove Reinforcement



D-2: Cove Reinforcement Installed

E. EDGE DETAIL CONSIDERATIONS

This technique is most likely to be used on products with directional aesthetics. These products often have special considerations to optimize appearance. Often a v-grooved front edge provides the best aesthetics. Products with directional aesthetics are listed in *DuPont™ Corian® Solid Surface Product Fabrication – Directional Aesthetics* (K-26833). This bulletin will identify which Product Fabrication Bulletin should be consulted for further information.

F. END CAP CONSIDERATIONS

If an end cap is required, it should be cut from the same sheet as the deck following normal v-grooving procedures. Each end cap will need to be made in two pieces. The main piece is an extension of the deck surface and is straight and can be seen along the left side of Figure F-1. The view is of the back side of the final piece so the end cap shown will be the left end cap when facing the final top. For demonstration purposes, the heavily-veined reverse side of the Corian® sheet was used on the finished side in the figures in this document. The piece that goes on the end of the backsplash needs to be cut to length and fitted. This may take some time. Also, the cove area may distort during thermoforming and may need to be trimmed with a file or sanding block to match the end cap. This is a labor-intensive process and should be priced accordingly.



Figure F-1: End cap cutting pattern

The second portion of the end cap comes from the region behind the backsplash. The two parts of the end cap are initially cut as one piece as shown in Figure F-1 and the close-up in Figure F-2.



Figure F-2: Close-up of backsplash portion of left end cap

THERMOFORMED COVERED BACKSPLASH



Figure F-3: Close-up of backsplash portion of right end cap



Figure F-6: Left (top) and right (bottom) end cap backsplash segments



Figure F-4: Underside view of front v-groove edge and left end cap



Figure F-7: Left end cap, backsplash portion dry fit



Figure F-5: Left end cap, backsplash portion not attached



Figure F-8: Clamping left end cap backsplash segment

THERMOFORMED COVERED BACKSPLASH



Figure F-9: Clamping right end cap backsplash segment

G. REFERENCES

DuPont™ Corian® Solid Surface Product Fabrication – Directional Aesthetics (K-26833)

DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Thermoforming (K-25297)

DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Edge Details and Buildups (K-25293)

DuPont™ Corian® Solid Surface Fabrication/Installation Fundamentals – Backsplashes (K-25294)

This information is based on technical data that E.I. du Pont de Nemours and Company 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.

© E.I. du Pont de Nemours and Company 2014. All rights reserved.

The DuPont Oval, DuPont™ and Corian® are trademarks or registered trademarks of E.I. du Pont de Nemours and Company (“DuPont”) or its affiliates. K-28235 10/14