

10.1. TYPES OF FRAMES

DuPont™ Corian® must be supported on a strong perimeter frame that will keep it level for the useful life of the top.

Varying lay-outs and overhangs place different challenges on our support frames.

The perimeter frame can be positioned on-site and the DuPont™ Corian® worktop placed over the frame.

A more commonly used technique is to create a perimeter frame in the workshop and bond it to the countertop with flexible adhesive. Installation and the creation of a perfect level is then completed by adjustment to frame and worktop as a whole unit.

The perimeter frame must be attached to the DuPont™ Corian® sheet with silicone, neoprene panel adhesive or polyurethane adhesive.

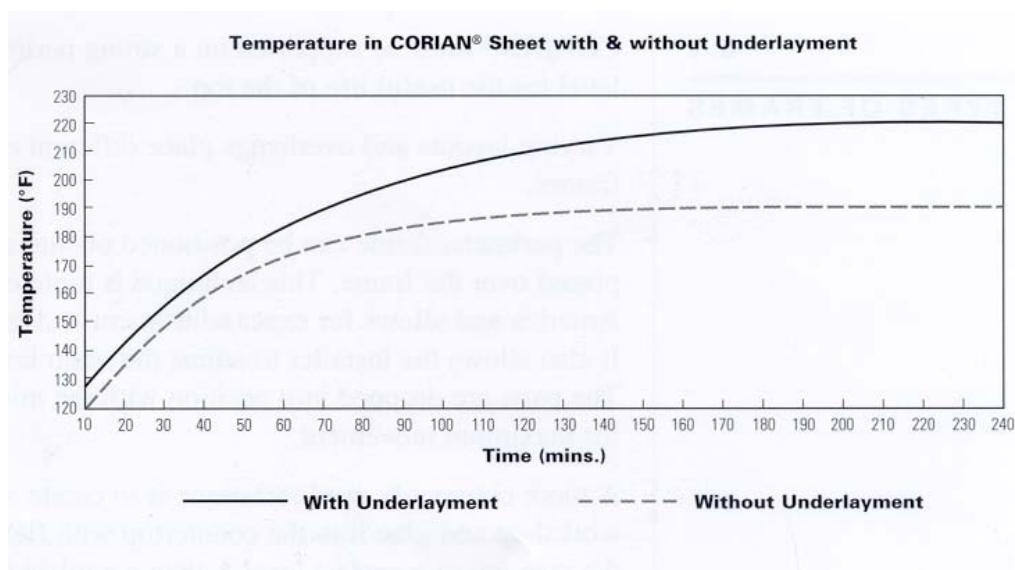
There are three types of materials that may be used in a DuPont™ Corian® frame support for kitchen countertops or other applications.

These are:

- moisture resistant M.D.F. board
- moisture resistant particle board
- moisture resistant plywood

Frame support cross members are highly recommended to add strength to the construction and allow fixing to cabinets.

Only flexible adhesives should be used to fix supports to DuPont™ Corian®.



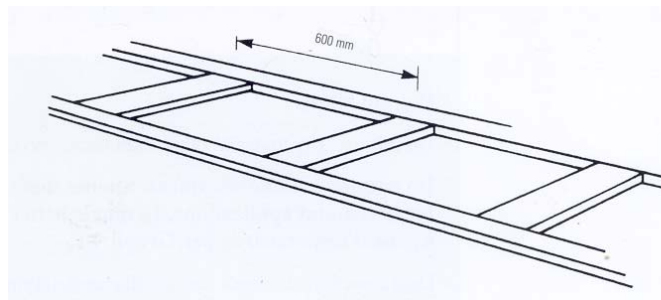
10.2. CONSTRUCTING THE FRAME UNDERLAYMENT

STEPS TO COMPLETION

Frame positioning

Front, back and side frame support is mandatory. Divisional supports can be added to enhance fixing or additional strength.

1. Plan cross members, to coincide with hob position, and divisional supports in a perimeter ladder structure. Plan that cross members are directly under all Corian® to Corian® seams for added strength.



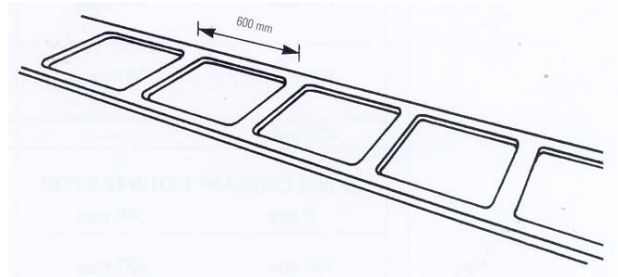
2. Seam the cross members using lamelo biscuit seams, serrated dowels, or rebate seams screwed and glued.
3. Frame support in kitchen countertop applications will need to be notched to allow enough space for the high strength cut-out DuPont™ Corian® reinforcement blocks and/or reinforcement seam support.

All Solid sheeting (Constructed Ladder System)

- Moisture resistant M.D.F. board
 - Moisture resistant particle board
 - Moisture resistant plywood
1. Rip raw sheet material into 90 mm strips.
 2. Plan cross members to coincide with hob position and divisional supports in a perimeter ladder structure as illustrated above.
 3. Join the cross members using screwed or glued lamelo biscuit seams, serrated dowels or rebate seams.

All Solid Sheeting (Routed Ladder System)

- Moisture resistant M.D.F. board
 - Moisture resistant particle board
 - Moisture resistant plywood
1. Measure material to length and width from template (remembering to modify width to accommodate downturns, reinforced seams, etc.)
 2. Mark on solid core sheets all sink and hob cut-outs, as well as all divisional supports.
 3. Using the markings created in Step 2, draw a frame plan on the solid core sheet.

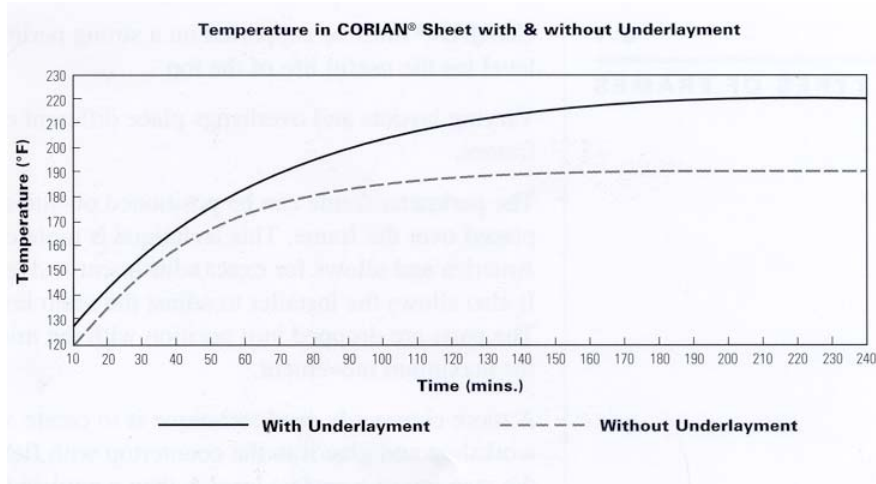


4. Using a 2200 W router with a single-flute plunge bit and pre-made router guides (templates), rout out the appliance cut-outs and the routed stiles to form a ladder frame structure. A C.N.C. router can also be used to form this type of ladder frame.

10.3. FULL UNDERLAYMENT SUPPORT

In some cases full underlayment is the preferred option when constructing DuPont™ Corian® countertops. We do prefer frame support (see chart).

However full underlayment will be covered by DuPont limited 10 year warranty if flexible adhesive is used to bond the full underlayment to the DuPont™ Corian® sheet.



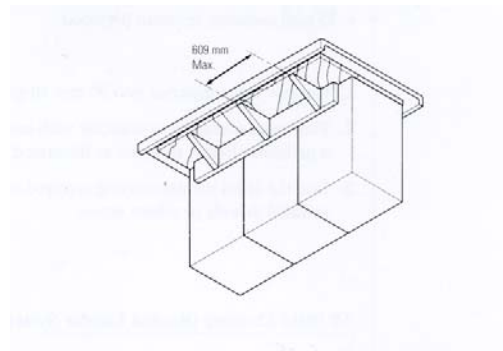
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10.4. FABRICATING AND INSTALLING OVERHANG COUNTERTOPS

As a general guideline, support is required for overhangs of DuPont™ Corian® containing seams or for 13 mm overhangs extending more than 150 mm and 19 mm overhangs extending more than 300 mm.

Adding thick edges makes the overhang stronger.



10.4.1. SUPPORT TYPES

Overhang Supports

FOR OVERHANGS EXTENDING		INSTALL
MORE THAN	AND UP TO	
12 mm DuPont™ Corian® Countertop		
0 mm	150 mm	No additional Support Required
150 mm	300 mm	Plywood Underlayment or Brackets of DuPont™ Corian®
300 mm	457 mm	Plywood Underlayment or Brackets of DuPont™ Corian®
457 mm	---	Legs or Columns

FOR OVERHANGS EXTENDING		INSTALL
MORE THAN	AND UP TO	
19 mm DuPont™ Corian® Countertop		
0 mm	300 mm	No additional Support Required
300 mm	457 mm	Plywood Underlayment or Brackets of DuPont™ Corian®
457 mm	---	Legs or Columns

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Seamed Overhang Support*

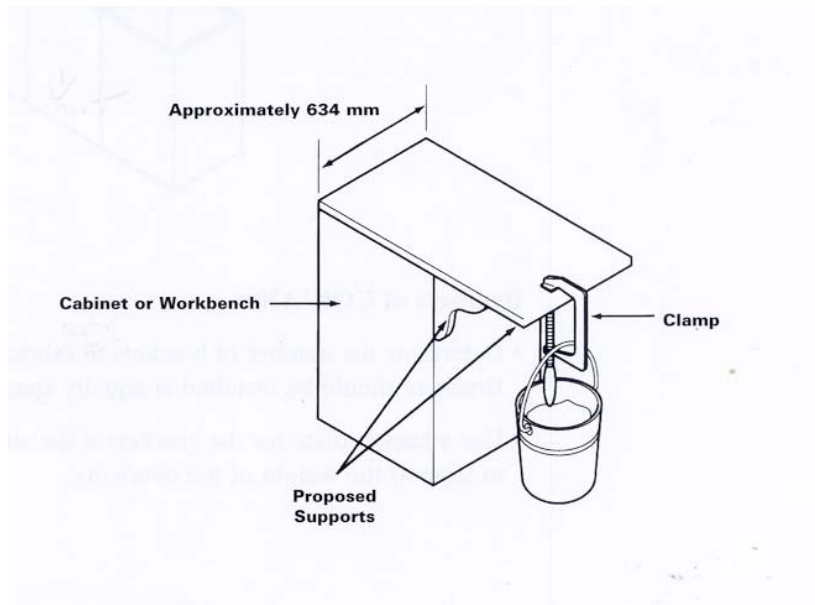
FOR COUNTERTOPS WIDER THAN	INSTALL
760 mm	Plywood Underlayment and Reinforcing Strips and/or Edge Build-ups of DuPont™ Corian®

Note: All seams must be reinforced. For countertops wider than 760 mm, put the seam in the overhang, not over the cabinet.

Testing other Support Designs

Other support designs may be acceptable. Fabricators can check the acceptability of their designs by running the following test:

- Install a 634 mm wide section of DuPont™ Corian® countertop.
- Install the proposed support.
- Hang a 45 kg weight from the clamp between the supports and 25 mm from the edge of the overhang.
- Measure the deflection caused by the weight (measure near the clamp).
- The maximum allowable deflection is 6 mm.



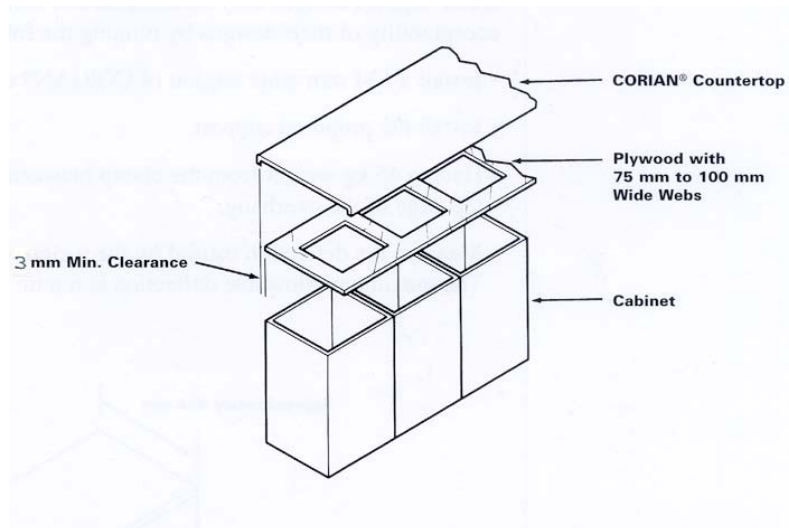
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10.4.2. FABRICATION AND INSTALLATION

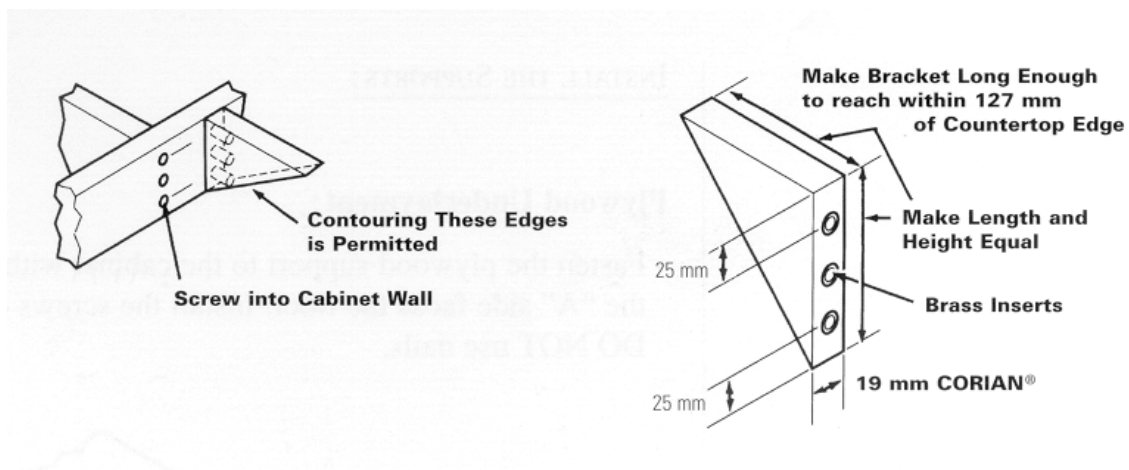
Plywood Underlayment

- Position A-C grade plywood or M.D.F. over the cabinet with the "A" side facing the floor.
- Cut out the plywood in the cabinet area, leaving 75 mm to 100 mm wide webs over the cabinet walls.
- Leave 3 mm minimum clearance between the plywood and built-up edge.



Brackets of DuPont™ Corian®

- Determine the number of brackets to fabricate by measuring the cabinet.
- Brackets should be installed at equally spaced intervals of 600 mm or less.
- Use a backer plate for the brackets if the side of the cabinet is not sufficient to support the weight of the overhang.



Seamed Overhangs

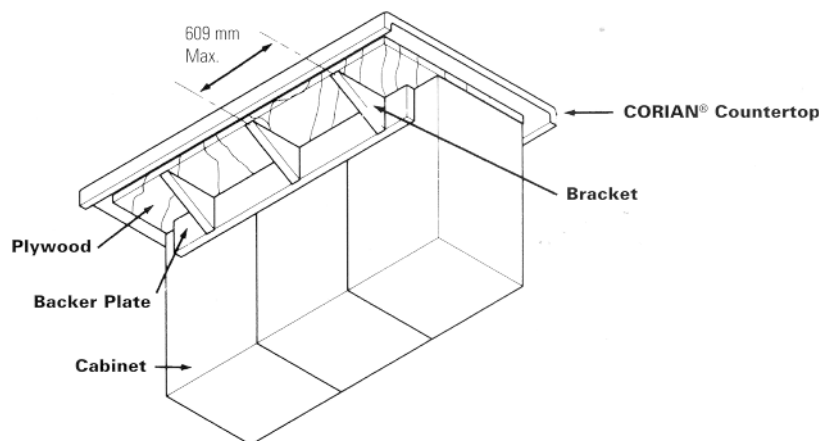
- Fabricate the seamed countertop, putting the seam in the overhang as far from the cabinet edge as possible.
- Position reinforcing strips or edge build-ups of DuPont™ Corian® under each end of the seam.
- Glue with Joint Adhesive, making sure that all seams in the edge are completely filled.
- Cut out the plywood underlayment following the procedure previously described.

Helpful Hints:

All seamed overhangs must be supported by at least the plywood underlayment and the seams must be reinforced.

Any edge design is acceptable; however, a built-up edge makes the overhang stronger.

Leave at least 3 mm between the plywood and the built-up edge.

Glue the Countertop to the underlaymentPlywood underlayment

- Use one dab of silicone adhesive every 300 mm to 457 mm to secure the DuPont™ Corian® countertop to the plywood.
- Stain/urethane, paint or cover the plywood with DuPont™ Corian® or laminate, if desired.

Brackets of DuPont™ Corian®

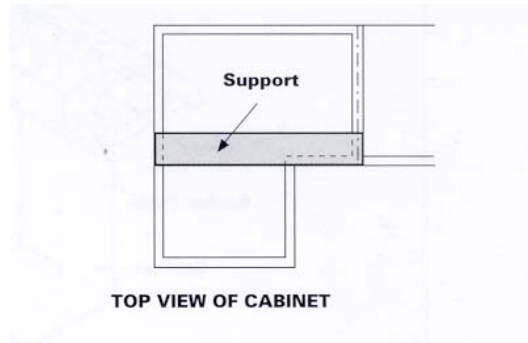
- Follow the procedure for glueing plywood underlayment.
- Use one dab of silicone adhesive 25 mm from the tip of each bracket. Apply dabs of silicone every 300 mm to 457 mm to the upper edges of the cabinets.

10.5. SUPPORTING INSIDE CORNERS OVER CARROUSEL CABINETS

Most carousel style cabinets provide inadequate support for inside corners in DuPont™ Corian® countertops, and therefore need to be properly supported.

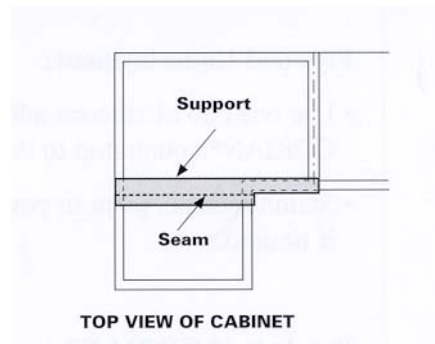
This section provides several methods of supporting these corners.

One support method uses 24 x 150 mm timber (or 19 mm plywood or M.D.F. board, but not particle or flake board) strip resting on one edge of the cabinet and running to the back edge of the cabinet (or a support strip attached to the back wall).



If a seam is made through or near the insider corner, the support must also include the seam reinforcement. Use a strip of DuPont™ Corian® and attach with Joint Adhesive.

The strip should be as thick as the countertop, should form part of the front edge as shown, and should be supported by the back edge of the cabinet (or a timber strip attached to the back wall).



There may be other support methods that can provide adequate support. Metal tubing and bars can be used when space is limited. To test a design apply a 40 kg weight to the inside corner. The maximum deflection allowed is 3 mm.

