

Technical Bulletin

Fabrication Guidelines - Corian® Benchtop with outdoor BBQ Appliances

Introduction

This bulletin addresses some additional considerations for the fabrication of Outdoor Benchtop applications using Corian®.

Overview

Corian® outdoor benchtop applications are to be fabricated using the same techniques outlined in the DuPont Corian® Fabrication Manual with 4 additional requirements that will be explained in more detail through-out this Technical Bulletin.

1. Colour Selection

Colour stability is often a primary concern when evaluating a material for exterior use. Many colours of Corian® exhibit good colour stability. Individual Corian® colours change differently and often exhibit whitening which can be renewed with cleaning and/or sanding. This change is more evident in saturated, chromatic and dark colours and least evident in whites, lights and many of the earth tones. Ultimately, it is up to the end user to determine if these characteristics are acceptable for the desired application.

Corian® colours are grouped into three performance categories as defined in ASTM D2244.

Group 1 — Colour change of less than or equal to 5 ΔE^*ab units in 10 years - good choices for exterior applications.

Group 2 — Colour change of 5 to 15 ΔE^*ab units in 10 years – good choices if some colour change is not objectionable.

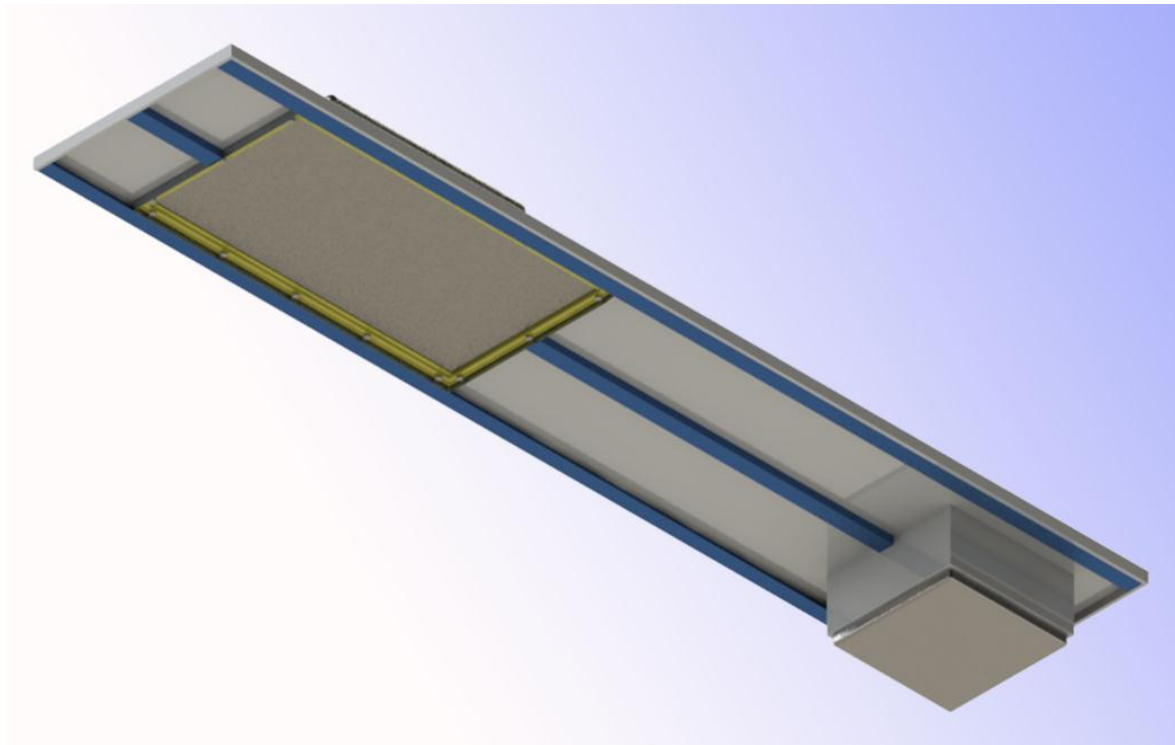
Group 3 — Colour change of greater than 15 ΔE^*ab units in 10 years – potential choices if greater colour change is acceptable.

The DuPont™ Corian® 10 Year Residential – External Use Warranty shall apply for all colours selected from Group 1.

2. Benchtop Support

Corian® must be installed where moisture cannot be trapped under the backside of the product, eg do not install directly on an unsealed concrete plinth. Corian® must be supported on a strong, continuous perimeter support frame that will keep it flat for the useful life of the top. There are several types of materials that **MUST** be used as a Corian® substrate when being installed in an exterior benchtop application, they include;

1. Aluminium tube - see fig 1 as an example.
2. Square metal tube stock



(fig 1)

Any timber based substrate material (including marine grade plywood) is NOT an acceptable support material for Corian® in exterior installations. Any damage to a Corian® Benchtop caused by incorrect substrate selection will not be covered by the DuPont Warranty.

3. Heat Protection

The majority of external BBQ units available on the market will emit greater heat than standard indoor domestic appliances used in the kitchen. As such, you will need to ensure the Corian® benchtop is well insulated from excessive heat.

There are 2 common BBQ styles that can be used with a Corian® benchtop, provided you follow the guidelines for managing excessive heat as outlined below.

a. Drop in BBQ

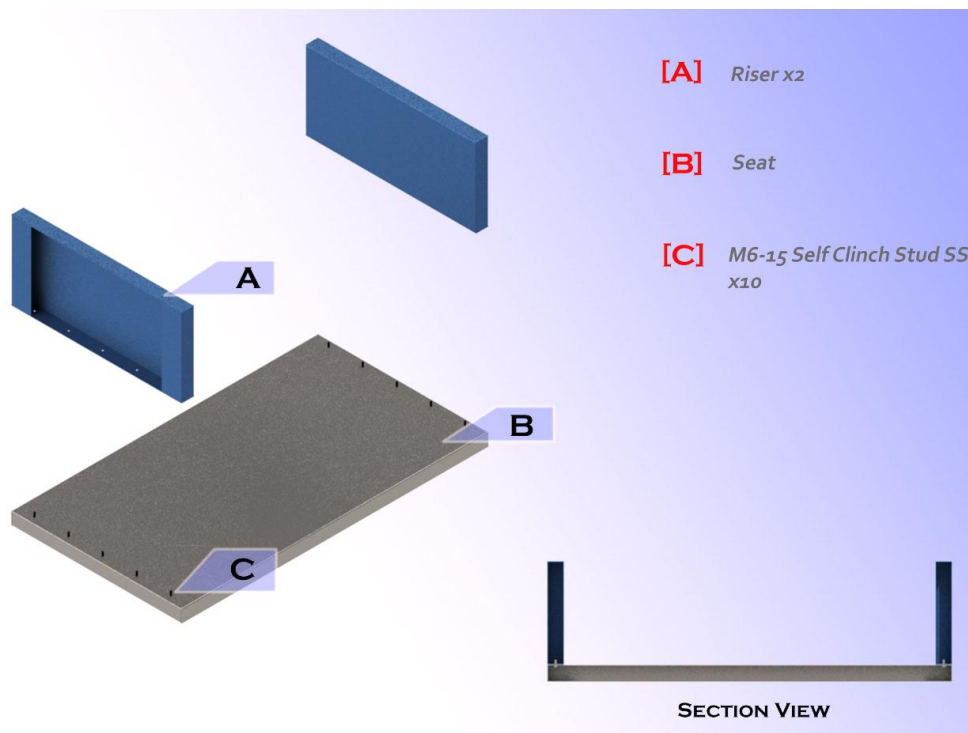


(fig 2)

This “drop in” style of BBQ (fig 2) is the most common type of BBQ being installed into a Corian® benchtop. To minimise heat damage we have outlined some key fabrication requirements;

Key Fabrication requirements:

- The drop in style of BBQ requires a 40mm protective stainless steel barrier to surround the unit as shown in fig 3. This will minimise excessive heat being deflected on to the Corian® benchtop.



(fig 3)

- Ensure that there are no joins within 300mm of the BBQ appliance and that any join in the benchtop is reinforced with a Corian® strap.
- These stainless steel heat barriers should be on all 2 sides and base of the BBQ and continue under the appliance as well to prevent any potential heat damage to the cabinetry as well.
- Be sure to allow for extra expansion of the Corian® due to heat buildup from exposure to the sun. Allow expansion of at least 1mm per metre of benchtop length, if it is being positioned between 2 walls.

b. Top Mounted BBQ



(fig 4)

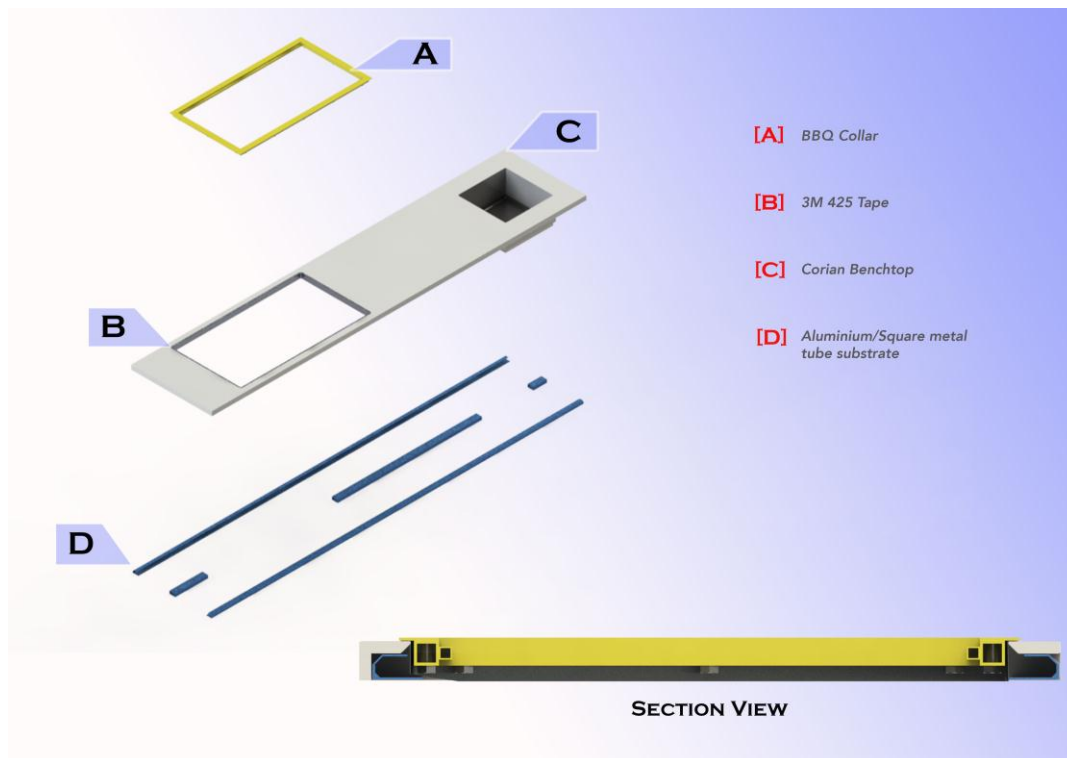
This “top mount” style of BBQ (fig 4) is gaining in popularity and requires a 40mm stainless steel collar to protect the Corian® benchtop from excessive heat.

CASF has stock of this type of 40mm stainless steel collar to suit the following Beefeater BBQ models;

- [BSL156SA](#)
- [BSH156SA](#)

Key Fabrication points:

- The benchtop depth requirements for this type of BBQ will be a minimum of 700mm.
- The cut-out and internal should be the standard shark nose profile and then sanded to a 150 grit finish.
- An overlapping layer of 3M 425 heat reflective tape (fig 5) is to be applied around the cut-out and extend underneath the stainless steel collar to it's outer perimeter.



(fig 5)

- Insert the 40mm Stainless Steel BBQ collar as shown in fig 5 above.
- Ensure that there are no joins within 300mm of the BBQ appliance and that any join in the benchtop is reinforced with a Corian® strap.
- Be sure to allow for extra expansion of the Corian® due to heat buildup from exposure to the sun. Allow expansion of at least 1mm per metre of benchtop length, if it is being positioned between 2 walls.



4. Warranty

DuPont have developed a specific 10 Year Installed Warranty for Corian® Benchtops when installed in an exterior environment. You can view a copy of the warranty document online at www.casf.com.au for further information.