



DuPont™ Corian® World

INSPIRATION FROM A SURFACE
THAT SEES A BEAUTIFUL FUTURE



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Original thinking

For over 200 years DuPont has pushed the boundaries of industry, inventing new materials and techniques and opening up new applications and solutions. This track record of successful invention has made a major contribution, both functionally and aesthetically, to global markets, projects and end-user products.

Corian® high-tech surface beautifully exemplifies this capability. Created to offer a higher performance alternative to conventional surfacing materials, it is now internationally recognised for its value to the world of design and architecture. Corian® is renowned for exceptional versatility, beauty and almost limitless applications for residential, public and commercial environments, both indoor and outdoor. From kitchens to lighting, home automation systems to touch control surfaces, bathrooms to the skin of buildings and furnishing and fashion accessories: the “alchemy” of Corian® can be found in an extensive and expanding range of everyday products, systems and designs.

Corian® embodies the spirit of endless evolution, built on world-class expertise in science, technology and marketing and an enviable heritage of genuine innovation.



An appetite for elegance

ENVIRONMENTS DEDICATED TO THE ENJOYMENT OF FOOD PRESENT PARTICULAR CHALLENGES. SENSES AND TASTES MUST BE ENTICED BY EFFORTLESS STYLE, WHILE FUNCTIONALITY CALLS FOR HYGIENE, RESISTANCE AND EASY-CARE UNDER CONSTANT USE.

Corian® proposes the ultimate solution for meeting this combination of demands. Capable of creating fluent, monolithic installations with seamless beauty, its talents cater to multiple aspects of 'hospitality' design, whether in a private home or a premiere hotel.

Integrity of performance together with the ability to transform to almost any design vision makes Corian® the enduring choice for everything from worksurfaces to dining tables, bar tops to serveries and, naturally, the sleekest of kitchen sinks.

Contemporary designs benefit from the pristine sophistication of Corian®.
Left: Corian® clad island benchtop; design by Hofman Dujardin Architects
Above: Corian® breakout table; design by Giant Design



Working every angle

Redefining the rules for what a kitchen can be, Karim Rashid chooses multi-faceted Corian® to realise his distinctive vision.

Origami kitchen by Amr Helmy Designs; design Karim Rashid; photo Amr Helmy Designs



A team player

Corian® is aesthetically and functionally compatible with many other materials, working readily alongside steel, timber, glass, stone and more for a harmony that goes deep beneath the surface.

Left: Corian® Raincloud kitchen benchtop & waterfall ends; design by Wilko Cabinets
 Above: Corian® Lava Rock kitchen benchtop; design by Ikal Kitchens



An inspiring outlook

While there's no doubt that first impressions count, the promise should never fade away into the background.
The beauty of Corian® was built to last.

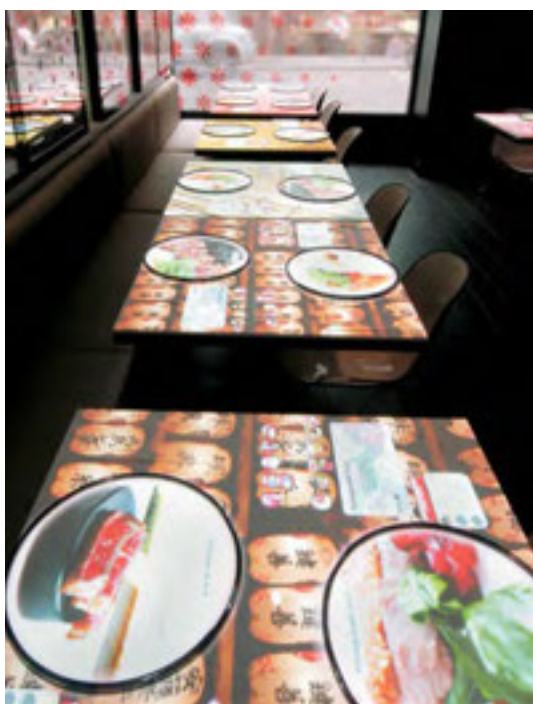
Corian® Witch Hazel (back lit) servery and Corian® Rice Paper kitchen benchtop; design by Ultraspace

Through thick and thin

With Corian® the options for combining shapes, levels, downturns, edge details, materials and colours are limitless. Designed to offer choice and adaptability, Corian® can be counted on to play any part within a scheme. In the hands of our expert fabricators, it can flow smoothly from breakfast bar to countertop, shelves to backlit display systems and so much more.

Corian® Cameo White counter cladding;
design by Cox Rayner Architects





Service with hi-tech style

Right: This circular champagne bar features a chromatically changing light strip and is accompanied by seamlessly bicoloured cocktail tables also in Corian®.

Fifth floor bar of Harvey Nichols, London; project by Shaun Clarkson ID; photo Jake Fitzjones

Above: An array of temptations at an M&S café beckons against a backdrop of easy-clean Corian®. Marks & Spencer in-store café, London; project Kiwi&Pom; photo Kiwi&Pom

Left: High concept dining at Inamo in London makes the most of durable Corian® table tops, which also serve as interactive and touch-sensitive projection screens.

Inamo restaurant, London; project Blacksheep Architecture and Design; photo Francesca Yorke



Water worlds

FLOWING WITH OPPORTUNITIES TO CREATE BEAUTIFUL BATHROOM AND LEISURE DESIGNS, CORIAN® IS THE WISE CHOICE WHERE WATER IS THE ESSENTIAL ELEMENT.

Smooth, silky to the touch and completely non-porous, Corian® will not warp, stain or promote the growth of mildew. Easily adapting to fluid shapes and integrated units, the material allows for a sensual experience of luxury combined with robust resistance and simplicity of care.

From egg-shaped baths to cylindrical basins and from one-piece vanity units to sleek wall cladding, there are few aspects of bathroom or spa design that cannot benefit from the lasting value of the material. A softly lustrous finish presents a subtle strength while the ability to add modified details enhances the versatility on offer.

Left: Corian® Cameo White walls and floor; design by Minosa Design
Above: Corian® Glacier White vanity top with integrated basin; photo by Riccardo Bianchi



Ahead of the curve

Shaping Corian® to your imagination is just one of the many satisfactions of designing (and living) with the material. Sympathetic to ambient temperature, invitingly velvet to the touch and flawless in its finish, Corian® can be as subtle or as striking as tastes demand, but is always confidently strong and sensually smooth.

Left: Corian® Glacier White 'LeCob' bath, design by Omvivo
Above: PHC washbasins by Boffi; design Piero Lissoni; photo Sabine Schweigert



Portraits of Life

Where there is a design dilemma, Corian® so often proposes an elegant and meaningful solution. Whether the challenge may lie in space or storage, form or content, fitting around plumbing or incorporating technology, integrated thinking applied to a highly workable material can resolve the issues in style.



Eureka moments

The revelation of working with Corian® comes in various forms: from the carefully created palette of exclusive colours through to advanced fabrication technology and the dependable service that comes with years of investment in skill, innovation, ethics and sustainability.

Left: Corian® Lava Rock shower walls; design by Ultraspace
Above: Corian® Lava Rock vanity benchtop and drawer fronts; design by Ultraspace.



Clean lines

When seeking fresh inspiration, simplicity is so often the key. Less is absolutely more when all you need is the right material.

Corian® Glacier White shower walls and floor;
design by Minosa Design



Facing the future

PUTTING TOGETHER ALL THE COMPLEX PIECES OF AN EXTERIOR CLADDING PROJECT
COMES EASILY TO ALL-WEATHER CORIAN®

With a beauty that is far greater than skin deep, Corian® has pushed the envelope of applications to now 'wrap' entire buildings. The virtues so ideally suited to interior surfaces also make Corian® superbly fit for purpose as a rainscreen façade, with the added benefit of excellent weatherability (plus proven UV resistance in a key collection of colours.)

Once you have explored the countless creative opportunities for specifying Corian® to the exterior of a structure, you can rest assured that these distinctive designs will endure. Resolute against stains, graffiti, temperature fluctuations, fire and time, Corian® is easy to return to pristine freshness with standard cleaning but can also be repaired should any untoward damage occur. Strong yet lightweight, its workability both on and off site can also optimise costs and time. Renewable and reusable, the sustained functionality of Corian® only adds to this value.

Left: A section of the sculptural curved façade made entirely from Corian® for the renovation of the Palais des Congrès, Ivoire Hotel, Abidjan, Ivory Coast; project by Pierre Fakhoury; photo Corian®
Above: Trifolium; design by AR-MA



A lasting impression

Whether you choose to customise the material in any number of stand-out ways, or keep it pure and simple, Corian® makes a high-performance ventilated façade that will maintain its fresh and inviting finish for many years to come.

Above: Hotel Seekoo; design by Atelier King
Kong Architects



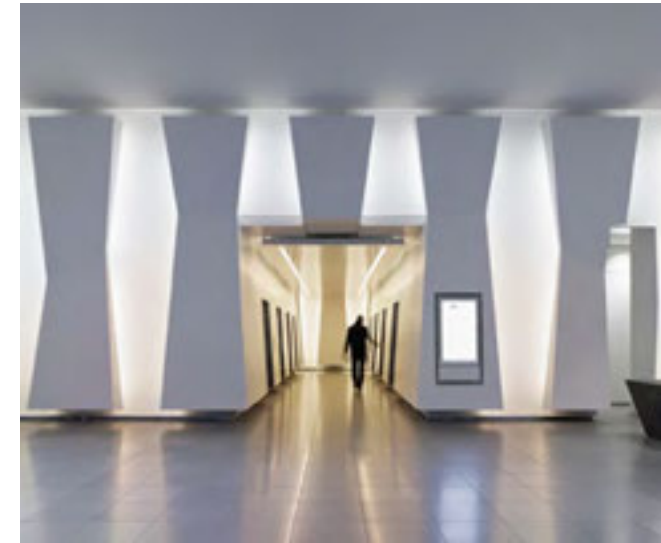
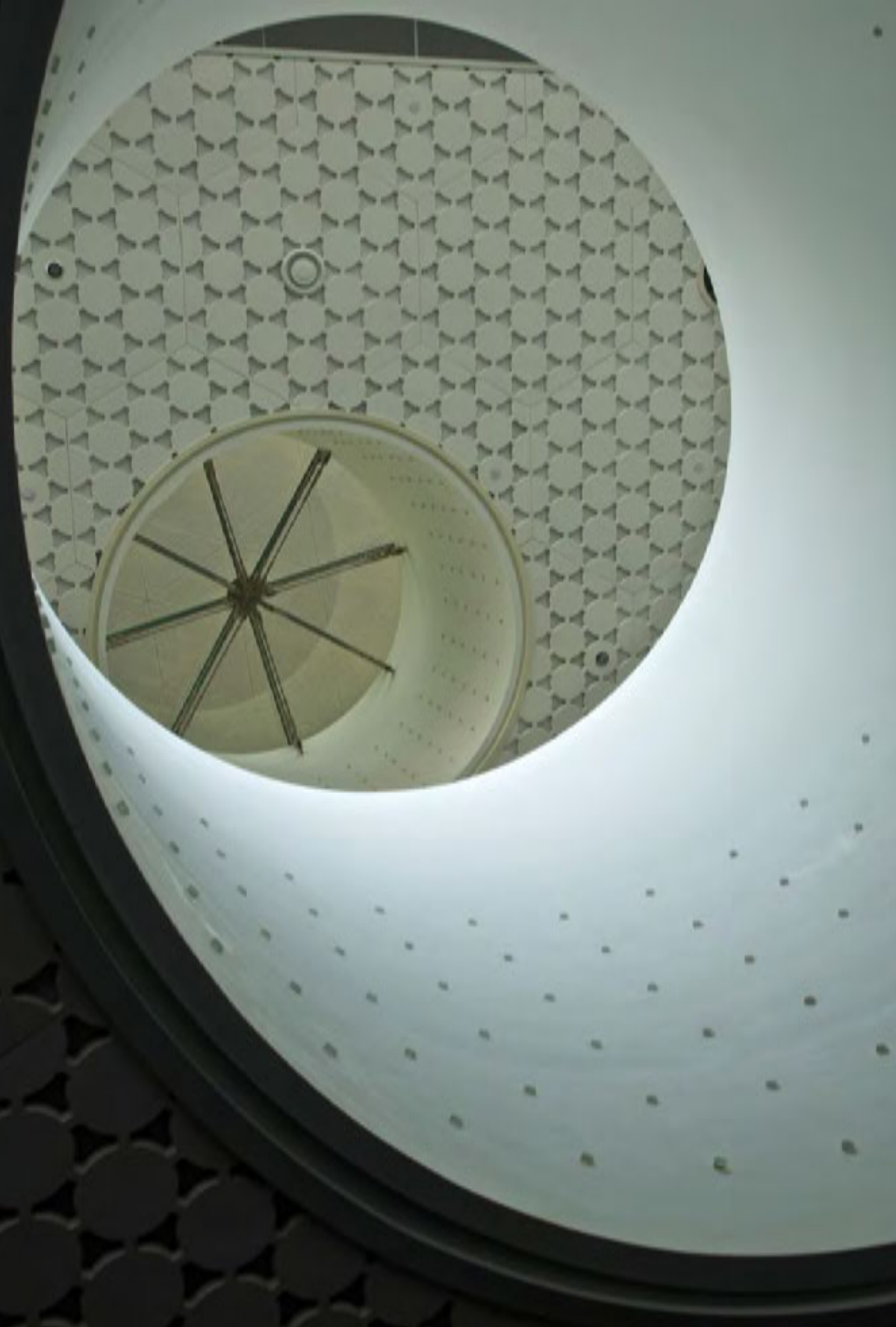
Modern methods

Compatible with a range of decorative techniques, fixing systems and complementary materials, Corian® offers an expansive vista of design and application possibilities for exterior use.

Above: The pavilion of Anansi playground in Utrecht, The Netherlands; project by Mulders vandenBerk Architecten;
photo Roel Backaert

Right: "SML House", project by CEU Cardenal Herrera for "Solar Decathlon Europe 2010" award, Madrid, Spain;
photo Borja Garcia





Furnishing the imagination

FROM THE MOST IMPRESSIVE OF STRUCTURAL INSTALLATIONS TO THE MOST REFINED OF ORNAMENTAL OBJECTS, CORIAN® WASTES NONE OF ITS POTENTIAL

It should come as little surprise that once designers discovered the numerous forms to which Corian® could be shaped and the practical tasks to which it could be applied, the material emerged from the best-dressed kitchens and into the wider world of creative potential.

Fashions may come and go but timeless beauty and meaningful utility endures. Every aspect of Corian® along the value chain from colour development to manufacture to end-use is carefully considered and designed for life.

Technical solutions from thermoforming to CNC patterning and sublimation printing can tailor Corian® in ways that make it unique to each aesthetic sensibility, and while its sensuous touch and lustrous finish may belie its low-maintenance toughness, there is no doubting the genuine, long term pleasure of living Corian®.

Left: Corian® wall and ceiling cladding; design by Suzhou Gold Montis Jiang Yezhou Design firm

Above: Corian® Glacier White wall cladding; design by Gray Puksand



Designed for work life

The wisdom of wipe-clean surfaces combined with artistic adaptability makes Corian® perfectly at home with the needs of reception design.

Corian® Glacier White reception counter and tables; design by HBO+EMTB



Enlightened philosophy

THE ETHEREAL TRANSLUCENCY OF CORIAN® CAN ILLUMINATE THE IMAGINATION

As consistently strong, solid and homogenous as Corian® is renowned to be, it also offers a delicate and diffuse relationship with light. This quality can be explored either by selecting from certain colour choices or by creatively thinning sections of the material and backlighting to enchanting effect.

From benchtops to expansive wall-cladding or commercial furniture installations, Corian® can be used for illuminated design either alone or in partnership with other materials and with smoothly integrated technology. An interplay of shadow and shape, translucent and opaque, colour and monochrome can be engaged by thoughtful combinations of material and space, light-source and reflection.

Left: Corian® Witch Hazel (back lit) bar top; design by Ultraspace
Above: Corian® Glacier White counter cladding; design by Transform Retail Projects



Glowing prospects

Corian® conducts the energy of light with a gentle diffusion, settling into strong, solid shape while appearing as though still fluid or gossamer soft in nature. Capturing ephemeral beauty within lasting material form, Corian® enables an exciting array of lighting designs.

Above: Design by Akitoshi Imafuku, K.K. Super Maniac

Right: Hotel Sofitel Brussels Le Louise, Belgium, project by Antoine Pinto; photo Sofitel





Illuminating work spaces

A material subject to daily use must not only be durable but also a pleasure to live with. These luminous pods are made with Glacier Ice and will reflect well on a wise decision year after year.

Fabrication by Australian Architectural Fitout Solutions, photo by [v]style + Imagery.



Tailor made for retail design

LUXURY OR HIGH STREET, BOUTIQUE OR EMPORIUM, THE RIGHT SHOPFITTINGS SHOULD REPRESENT A DISTINCTIVE BRAND IDENTITY WHILE ALSO BEING READY TO SERVE

When it comes to fitting out retail environments, with Corian® it's never a hard sell. Apart from the ability to customise a project to embody the philosophy of both architect and client, Corian® can withstand the demands of high-traffic commerce with confident grace. Furthermore the material is renewable to full beauty should any wear and tear become excessive. Add to that an original collection of timeless colours (custom colours are also possible) and the multiple options for bespoke detailing, and there's little that Corian® can't offer to retail design.

Whether as display systems, cashiers desks, robust ornamentation, fitting room furniture, even doors, drawers and decorative shop fronts, the material can serve whatever purpose is asked of it - and with Corian® the long term experience of the brand remains a vital investment in customer satisfaction.

Left: Corian® Glacier Ice wall partition cladding; design by Cox Architecture in conjunction with MBBD and Seventh Wave

Above: Corian® Bisque wall cladding; Elie Tahari; design by Lissoni Associates



Style with substance

Corian® not only enables the expression of distinctive character, but also allows unique merchandise to speak for itself. Working wisely alongside other materials within a structure, it partners the product offering with conviction.

Left & Above: Store façade, Sportalm fashion store, Wien, Austria; project Baar-Baarenfels Architekten; photo Baar-Baarenfels Architekten

Right: Display desk at Acne-Store, Berlin, Germany; project Pierre Jorge Gonzalez/Judith Haase/Atelier Architecture & Scenography; photo Pierre Jorge Gonzalez/Judith Haase/Atelier Architecture & Scenography





Public service

THE SUSTAINED DURABILITY OF CORIAN® MAKES IT A SMART CHOICE FOR MULTI-USER SPACES

While it's important that projects for public or high-traffic use think long term about the quality, performance and maintenance of the chosen materials, these spaces should also be pleasing, uplifting and inspiring. Corian® gets to work on solving these challenges with dynamic dependability.

Around the world, museums, galleries, educational buildings, lobbies, leisure facilities, airports and even subway stations have employed the material's potential with installations that span from the artistic to the utilitarian. Able to address all the key issues from optimising space, multi-user demand and maximising budgets to realising the most exotic of design ideas, Corian® has been working diligently in the public eye for many years.

Whether supporting ideas or weary bodies, Corian® serves with faithful poise.

Left: Corian® Glacier White wall cladding; design by Bluesky design.

Above: iCity kiosk counter cladding; design by Coniglio Ainsworth Architects

Public amenities

Corian® was the ideal material for achieving seamless connection between the complex faceted geometry of the wall, ceiling and skylight surfaces. It was also selected because it is resilient and easy to clean and maintain in this highly public environment.

According to the design team, “the faceted geometry of the wall, ceiling and skylight surfaces is intended to enhance the play of both natural and artificial lighting and this was enhanced with the use of Corian®”.

Corian® Glacier White washplane, wall and ceiling cladding, Perth Cultural Centre; design by Coniglio Ainsworth Architects





The right prescription for healthcare

HYGIENE-CRITICAL ENVIRONMENTS DEMAND THE OPTIMUM COMBINATION OF RESISTANCE, AESTHETICS AND VERSATILITY. CORIAN® PRESENTS THE SENSIBLE SOLUTION FOR A BROAD SCOPE OF HEALTHCARE DESIGNS

Hospitals, laboratories and dental facilities internationally have benefitted from the invaluable combination of certified performance, sustainability and elegance that Corian® offers. Whether as completely non-porous and functionally seamless workbench installations, user-friendly curves, or a comforting mural in a children's ward, Corian® enhances both design ingenuity and peace of mind. Clinicians and architects alike have understood how the sensory appeal of the material together with its contribution to preventing cross-infection and its trustworthy response to appropriate cleaning makes Corian® the perfect partner for a wide range of applications. And while pristine white is the obvious choice for key operational surfaces, there's no reason why design schemes for reception areas, patient accommodation, therapy facilities and consulting rooms should not take full advantage of the extensive and encouraging colour choice on offer.

Left: Corian® Glacier White with Aspen inlay for operating room wall cladding; design by Angel Mahchut
Above: Corian® Aspen scrub basin and wall cladding; design by Angel Mahchut



Smooth operator

A study in hygienic fidelity, Corian® is utterly non-porous with a sleek homogeneity that also allows for streamlined design.

Above: Corian® integrated baby bath
Left: Corian® laboratory benchtops; Aquinas College, design by McGlashan Everest

Teaching and research facilities, nurses stations, treatment rooms, operating theatres and scrub rooms can all take advantage of the multiple possibilities for applying Corian® to critical surfaces.



The journey of ideas

THE UNIQUE CHALLENGES PRESENTED BY TRANSPORT DESIGN, WHETHER AFLOAT,
AIRBORNE, MOBILE OR STATIONARY, ARE ADMIRABLY ADDRESSED BY
THE CAN-DO ATTITUDE OF CORIAN®

Compact spaces, awkward shapes, spill-proof ergonomics, climate and pressure conditions, flexural strength and seamless glamour...all considerations for transport projects demanding a material that can go the distance. Designs from mega yachts to cruise liners, motor homes to commuter trains, private jets to passenger planes - plus the ports, stations and facilities that serve them - have all enhanced the experience of travel by trusting in Corian®.

The need for a tough yet lightweight material that can adapt to almost any creative vision is set to go only from strength to strength. Even the sky presents no limit - perhaps soon Corian® will join a number of other innovative DuPont materials already contributing to advanced space flight? Sophisticated in performance, technology and aesthetics, there's no doubt Corian® is headed for an exciting future.

Left: Interiors of Comet 52 by Comar Yachts; project by Studio Vallicelli; photo Comar Yachts
Above: Interiors of yacht by Holland Yachting Group; photo Holland Yachting Group



Where next?

Skilled fabrication, optimum adaptability, enduring performance and sheer beauty make Corian® the right fit for the most demanding design projects, wherever your imagination may take you.

The black Light Cycle from “TRON: Legacy” movie, made in Corian® by Altha® for “TRON designs CORIAN®” exhibition (organized by Corian® under license of Disney at Milan week of design); photo Leo Torri for Corian®

Know-how

MANIPULATE THE LIMITS OF SHAPE

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What is Corian®



Composition of DuPont™ Corian®

CORIAN® IS A SOLID, NON-POROUS, HOMOGENEOUS SURFACING MATERIAL COMPOSED OF $\pm 1/3$ ACRYLIC RESIN (ALSO KNOWN AS POLYMETHYL METHACRYLATE OR PMMA) AND $\pm 2/3$ NATURAL MINERALS. THE MAIN MINERAL IS ALUMINIUM TRIHYDRATE(ATH) DERIVED FROM BAUXITE, AN ORE FROM WHICH ALUMINIUM IS PRODUCED. FOR MORE INFORMATION ON THE COMPOSITION OF THE MATERIAL, PLEASE CONSULT THE CORIAN® MATERIAL SAFETY DATA SHEETS (MSDS) AVAILABLE AT [HTTP://MSDS.DUPONT.COM](http://MSDS.DUPONT.COM) OR FROM YOUR LOCAL SUPPLIER.

Key characteristics

RESISTANT

Since its introduction in 1967, Corian® has proved itself to be a remarkably durable material that is easy to live with. It cannot delaminate and stands up well to daily wear and tear. It resists most of the impacts, nicks and cuts that occur in heavy traffic areas. Corian® has been tested for its mechanical, thermal, electrical and other surface properties. Results of these specific tests as well as details on the other physical properties of Corian® can be consulted in the “PERFORMANCE PROPERTIES” section of this book.

INCONSPICUOUS JOINS

The applications for Corian® are limited only by the imagination. Pieces of Corian® can be glued together inconspicuously to create a seamless look, giving virtually unlimited design possibilities for surfaces. Long counters, for example, can be made easily in lightweight pieces in a workshop and then joined together at the installation site. Edges can be built up to appear thicker.

REPAIRABLE

Surfaces in Corian® are renewable, meaning they can be fully restored with ordinary mild abrasive cleansers and a scouring pad. Cigarette burns, for example, can be easily removed in this way. Damage caused by abuse can usually be repaired on site without having to completely replace the material.

NON-TOXIC

Corian® is an inert and non-toxic material. Under normal temperature conditions, it does not emit gases. When burned, it releases mainly Carbon Oxides and the smoke generated is optically light and does not contain toxic halogenated gases. Because of these properties, Corian® is used in public areas and for sensitive applications such as airport check-in counters, walls and work surfaces in hospitals and hotels.

THERMOFORMABLE

Corian® can be thermoformed in wooden or metal moulds at controlled temperatures in order to create various 2D and 3D design objects. Embossing effects can also be created using the Bas Relief technique.

Production

TRANSLUCENT

The translucency of Corian® is especially striking in the lighter colours as well as with thinner sheets. Many designers are now using the material to create lamps or lighting effects in various applications. The new colour family, called the Illumination Series, consists of colours in 6 mm and 12 mm sheets featuring enhanced translucency to be used for creating special lighting effects.

WORKABLE LIKE WOOD

Corian® can be worked like hardwood and using similar tools. Most Corian® fabricators originally trained as carpenters.

ENVIRONMENTALLY FRIENDLY

Corian® is manufactured in compliance with strict standards in order to limit waste and energy consumption at all stages of the production process. Both the material itself and the adhesives and sealants used to install it are GREEN GUARD Indoor air quality certified® for producing low VOC emissions as well as being Green Tag certified.

SOLID

Colours and textures run through the entire thickness of the material and cannot wear away. Corian® is a solid material and cannot delaminate.

COLOURFUL

The refined colours of Corian® allow for a creative and inspired working palette of solid, textured and translucent hues. You can choose a single colour; a neutral basis for design; or experiment with eye-catching harmonies. Corian® can also be used as inlays, accents, or as a versatile complement to other materials such as metal, wood, stone, glass, etc. Corian® can also be sublimation printed with any digital image.

Corian® is manufactured by DuPont™ as sheets and pre-formed shapes in three plants located in the USA, Japan and Korea. Corian® sheets are produced on continuous casting lines and Corian® shapes are produced through polymerization inside metal moulds using a continuous manufacturing process.

DuPont™ Corian® product description

SHEET SIZES AND COLOURS

Corian® is available in various standard thicknesses and is easily cut to size by professional fabricators. All colours in the standard colour palette are available in 12 x 760 x 3658 mm sheets. A number of these colours are also available in various other sizes. Standard dimensions of Corian® sheets are:

6 mm sheet	760 x 2490 mm	930 x 2490 mm
12 mm sheet	760 x 3658 mm	930 x 3658 mm
19 mm sheet	760 x 3658 mm	

FR COLOURS (EN 13501-1)

Sheets can also be supplied in an FR grade, which is more resistant to fire for applications in public areas and for cladding projects, according to norm EN 13501-1, classified as B - s1, d0. Regular Corian® colours are classified as C - s1, d0.

SHEET OPTIMISATION

The final cost of Corian® fabricated products may be influenced by material wastage. In order to reduce costs, DuPont™ suggests that sheet optimisation be taken into consideration during the design process.

DUPONT™ CORIAN® JOINT ADHESIVE

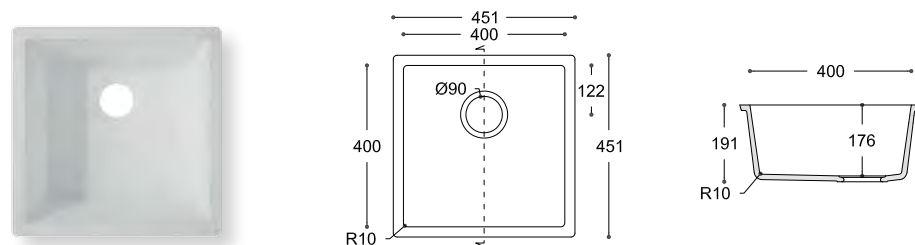
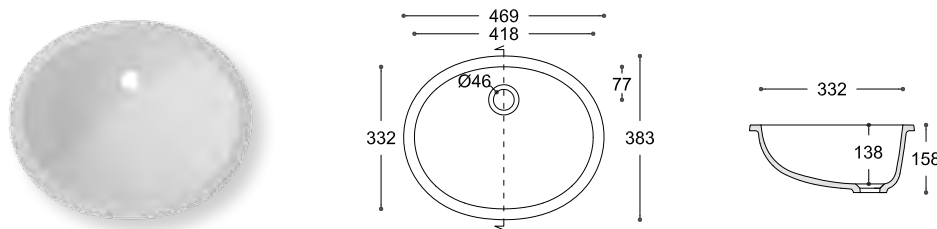
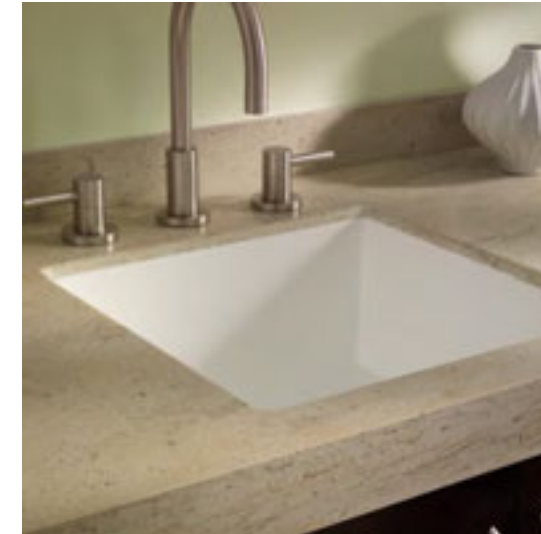
Corian® joint adhesive is produced in a range of specific colours to co-ordinate with Corian® sheets and shapes. In order for the DuPont™ 10-Year Limited Installed Warranty to apply, all Corian® seams must be bonded with Corian® joint adhesive.

DUPONT™ CORIAN® SHAPES

A wide range of Corian® shapes created using cast moulding technology is available in 4 solid colours for custom integration with Corian® sheets in order to create a single, continuous surface. This includes vanity basins in solid colours for bathrooms, single and double sinks for kitchens, bars, small wash-up areas, hospitals and laboratories. Bonding Corian® shapes into sheets does not create any rims that might trap dirt or water, minimises cleaning and maintenance and provides improved hygiene. Care, maintenance and installation instructions are included in the packaging. Appropriate accessory products, including installation hardware, are available and recommended for residential kitchens only.

CUSTOM SINKS AND BASINS

Watch your design materialise in Corian®. Our current sink and bathroom collection is just a starting point. We can create shapes to your exact specifications, giving you the freedom to realise your own design in your next project. This new offer is perfect for multi residential or commercial buildings where having that unique design in the kitchen or bathroom space is important to you and your client. To learn more about how we can bring your design ideas to life contact us on 1300 795 044.



Please discover our entire collection of Corian® sinks and bowls on the web: www.casf.com.au

How to specify DuPont™ Corian®

FIVE POINTS TO REMEMBER WHEN SPECIFYING CORIAN®:

1. Specify product manufacturer: Corian® is made only by DuPont™.
2. Specify nominal thickness: 12mm and 19mm for horizontal applications or 6mm, 12mm or 19mm for vertical applications. For special thicknesses, please contact your Corian® representative.
3. Specify exact colour(s) by name. Please visit our website at www.casf.com.au
4. Specify code references and colours: be sure to specify the exact code references and the colours of bowls and sinks (e.g. 810 S cameo white).
5. Specify fabrication and installation: to ensure that the fabrication and installation of your job meet the requirements for the 10-Year Limited Installed Warranty, specify that the work must be carried out by a Certified Fabricator/Installer.

Fabrication & Finishing

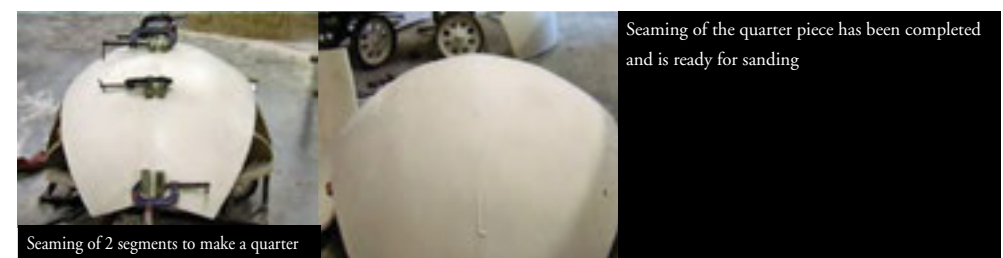
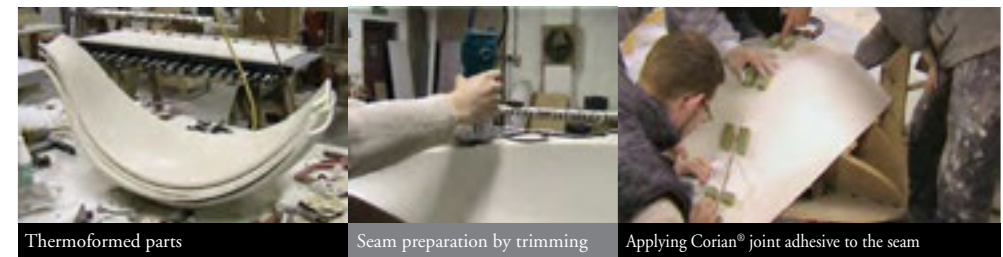
Performance properties of Corian® products

PROPERTY	TEST METHOD	TYPICAL RESULTS		UNITS	*
		6 mm sheet	12 mm sheet		
Density	DIN ISO 1183	1.73 – 1.76	1.68 – 1.75	g/cm ³	1
Flexural modulus	DIN EN ISO 178	8920 – 9770	8040 – 9220	MPa	1
Flexural strength	DIN EN ISO 178	49.1 – 76.4	57.1 – 74.0	MPa	1
Elongation at break	DIN EN ISO 178	0.58 – 0.94	0.76 – 0.93	%	1
Compressive strength	EN ISO 604	178 – 179	175 – 178	MPa	1
Impact resistance (spring load)	DIN ISO 4586 T11	> 25	>25	N	1
Impact resistance (ball drop)	DIN ISO 4586 T12	> 120	>120	cm	1
Surface hardness (Mohs index)	DIN EN 101	2-3	2-3		1
Resistance to surface wear	DIN ISO 4586 T6	63 – 75	58 – 63	Lost weight mm ³ /100 rev.	1
Resistance to boiling water-increase in weight	DIN ISO 4586 T7	0.1 – 0.7	0.1 – 0.3	%	1
Resistance to boiling water-surface change	DIN ISO 4586 T7	No visible change	No visible change		1
Dimensional stability at 20°C	DIN ISO 4586 T10	< 0.16	< 0.16 % change in length		1
Resistance to dry heat-180°C	DIN ISO 4586 T8	4-slight change	4-slight change		1
Lightfastness (Xenon arc)	DIN ISO 4586 T16	> 6	> 6 Blue wool scale		1
Anti-slip properties-with 100 mm grit	DIN 51130:1992-11	5.8° – do not pass R9 requirement (6° min)		° angle	2
Anti-slip properties-with 120 mm grit	DIN 51130:1992-11	7.6° – pass R9 requirement (6° min)		° angle	2
Anti-slip properties-with 150 mm grit	DIN 51130:1992-11	8.1° – pass R9 requirement (6° min)		° angle	2
Resistance to bacteria and fungi	DIN EN ISO 846	Does not support microbial growth			3
Electrostatic surface behaviour	DIN IEC 61 340-4-1		> 1 x 10 ¹²	W	4
Calorific potential	NF EN ISO 1716		9.15	KJ/g	5
Smoke index	NF F 16-101	Class F0	Class F0		6
Reaction to fire	NF P 92-501	Class M2	Class M2		7
Reaction to fire (Corian®)	EN 13501-1:2003	Euroclass C –s1, d0	Euroclass C –s1, d0		8
Reaction to fire (Corian® FR)	EN 13501-1:2003		Euroclass B –s1, d0		8
Fire behaviour (Corian® FR)	DIN 4102-1		Class B1		9
Fire tests (Corian® FR)	BS 476 part 6 & 7		Class 0		10
Fire testing - railroad vehicle	DIN 54837		S4, SR 2, ST 2		11
Smoke toxicity	DIN EN ISO 5659-2		Pass		12

- (1) test report Q IWQ MBL 733 1785-1 (for classification according to DIN EN 438 part 1 & 7) from LGA –Germany/04-2004
 (2) test report BMW 0411048-03 from LGA-Germany/03-2004
 (3) test report 5642219 from LGA-Germany 03/2004
 (4) test report EMA-SMG-814 1131 IWQ-MBL 734 1109 from LGA-Germany/03-2004
 (5) test report 11624-04 from SME/SNPE-France/03-2004
 (6) classification reports 11631-04 & 12260-05 from SME/SNPE-France/03-2004 & 05-2005
 (7) classification reports 11625-04 & 12261-05 from SME/SNPE-France/03-2004 & 05-2005
 (8) classification reports ES131024 & ES131025 from Warrington Fire Research-UK/03-2003
 (9) test report 230005623 from MPA NRW-Germany/2006
 (10) test reports 154054 & 154053 from Warringtonfire-UK/06-2006
 (11) test report P60-08-0018 (classification according to DIN 5510-2) from RST-Germany/01-2008
 (12) test report P60-08-3107 from RST-Germany/02-2008.

Different ways to create

THE PROCESS BELOW ILLUSTRATES HOW CORIAN® CAN BE TRANSFORMED FROM SHEETS INTO, FOR EXAMPLE, AN INNOVATIVE SPEAKER MOUNTING SYSTEM. IT CAN BE CLEARLY SEEN HERE THAT CREATING WITH CORIAN® IS AN EXERCISE OF BOTH CRAFTSMANSHIP AND INNOVATION.





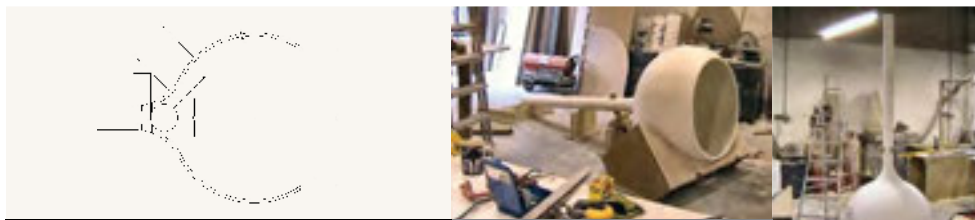
Assembly of 2 quarter pieces to half a shell



Final trimming of the shell

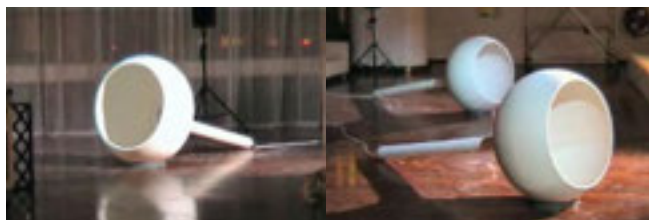
Final sanding of the shell

Assembly of 2 halves of a shell



Detail of the listening shell with indication of speaker

Final assembly of the shell



Completed listening shell

Basic fabrication techniques

Corian® is a material which combines the durability of stone with the workability of hardwood. It is impossible to cover all fabrication techniques in this book, but the following sections describe the most important elements.

CUTTING

Corian® is harder than wood. In order to cut a full sheet to obtain the desired pieces, saws and routers must be powerful enough to work the material properly. Straight cuts are made with a circular saw with carbide-tipped or diamond-tipped teeth.

Curved cuts are made with manual routers or with numerically controlled routers (CNC), depending on the number of identical pieces that need to be cut. Rounded inside corners are routed in order to prevent cracking. Router bits must have tungsten carbide tips.

SEAMING

All the edges of the pieces to be joined must be straight, square and thoroughly cleaned using ethanol on a clean white cloth before applying adhesive. Two-component Corian® joint adhesive in the appropriate matching colour should be used to obtain inconspicuous seams - one of the key features of Corian®.

SANDING

Surfaces are sanded with a random orbital sander following the “North-South, East-West” direction using small circular motions. Sanding is to be done in several steps from rough to fine grades of sandpaper.

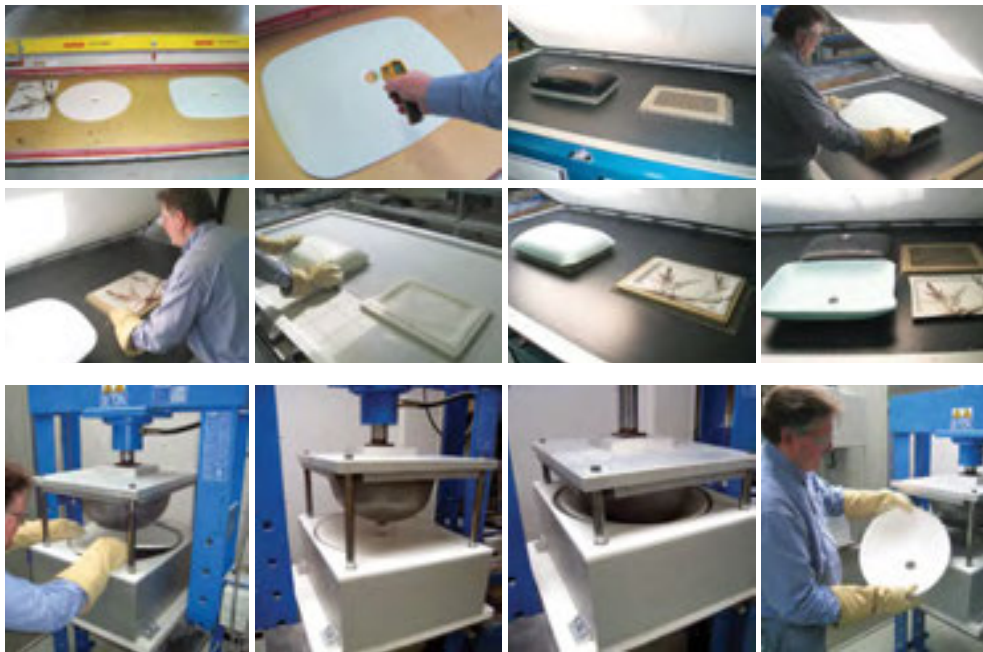
The finish can be varied from matt to high-gloss, depending on the effect the designer wishes to obtain. DuPont™ suggests a semi-matt finish, which is the easiest finish to obtain and maintain. High-gloss finishes tend to dull over time, especially in areas which see intense use.



Advanced fabrication techniques

THERMOFORMING

Corian® can be thermoformed using plywood or metal moulds at temperatures of approximately 160°C. Corian® may be formed up to an internal radius starting at 25 mm with two dimensional thermoforming, depending on the thickness and the colour of the sheet. Even cooling in the mould will prevent residual stresses and provide superior results. Thermoformability differs depending on the saturation or particle loads in the sheet.



INLAYS

Inlaying Corian® with different materials or with different colours of Corian® can enhance the inherent beauty of the material. Various inlay materials are compatible with Corian®. DuPont™ suggests avoiding large inlays containing metals because of their high thermal expansion coefficients. Logos can be easily created using inlays in Corian®.

SUBLIMATION

Known as “image transfer by sublimation”, this technique allows designers to personalise Corian® in a completely new way. The sublimation process consists of transferring images into a sheet of Corian® so that - almost like a human tattoo - a permanent image is created within the surface. The printed Corian® can then be re-polished and thermoformed in the same way as unprinted Corian®. Image transfer by sublimation is a new tool for communication and for enhancing creative expression by designers, engineers and architects.



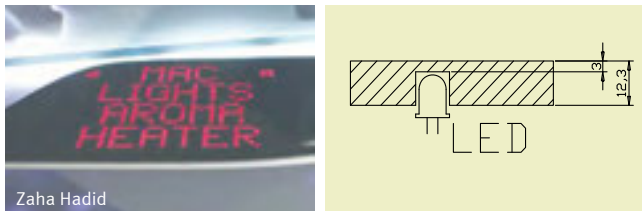
TRANSLUCENCY

Translucent effects can be obtained via the use of translucent colours or by reducing the thickness of standard Corian® colours.

TRANSLUCENCY BY REDUCING THICKNESS

In certain colours and thicknesses, Corian® reveals its full radiance and depth when it is exposed to light. This quality lends Corian® not only to the creation of atmospheric room lighting, but also to sensuously-shaped lamps, dramatically illuminated furniture, and screens which reveal an intricately-carved pattern when backlit.

In particular, lighter and solid colours are the best for use in this kind of application. These kinds of effects can be obtained by locally reducing the material's thickness via routing or engraving. For greater light transmission, Corian® can be reduced to a thickness of 2-3 mm to allow more light to pass through. When a specific point of light is required, an integrated LED light source positioned in the back of a hole is a good option. This type of set-up is often used to create a logo or signage.



To obtain a more diffuse effect, the light source is generally installed at a distance (typically 15 cm) from the back of the panel. The routing can be done with a CNC machine in any kind of pattern or design. Playing with varied depths of the routed pattern and creating a 3D relief gives the possibility to create an effect reminiscent of a painting.



TEXTURE (CNC/BAS-RELIEF)

Corian® makes it possible to obtain innovative three dimensional effects, which gives a new perspective to architectural design and home decoration. Creating a 3D texture on Corian® can be done through CNC routing or via bas-relief. With the bas-relief technique, the Corian® panel is heated to 160°C and then pressed on a “stamp” with the required pattern.

SAND BLASTING

Just like wood, glass and other materials, Corian® can be sandblasted with different mediums. Playing with the roughness and depth of the blasting can create numerous effects. This technique can be used for signage and wall cladding, or to add dramatic accents to a design piece.

Basic guidelines for designing with DuPont™ Corian®

Perimeter supports are used on the underside of a Corian® countertop to avoid warping and cracking. The perimeter support strips should be made in moisture resistant MDF or moisture-resistant plywood. Corian® countertops are bonded to the support strips using flexible silicone adhesive. Never screw directly into Corian®. All Internal corners should be radiussed.

The required method for installing square hobs is the high-strength cut-out. This technique has been patented by DuPont™ and it is the best and most effective way to avoid cracking around hobs. Flush-mounted hob units integrated into a Corian® countertop are covered by the DuPont™ 10-Year Limited Installed Warranty, provided that the recommended fabrication and installation guidelines have been followed. These guidelines are included in the Corian® fabrication manual, and Quality Network Corian® fabricators have the necessary knowledge to install any type of hob.

THERMAL EXPANSION

The thermal expansion of Corian® is approximately 1 mm per meter with a temperature change of 30°C. Always leave a gap of at least 1.5 mm to allow satisfactory caulk penetration.

Specific applications

Vertical surfaces

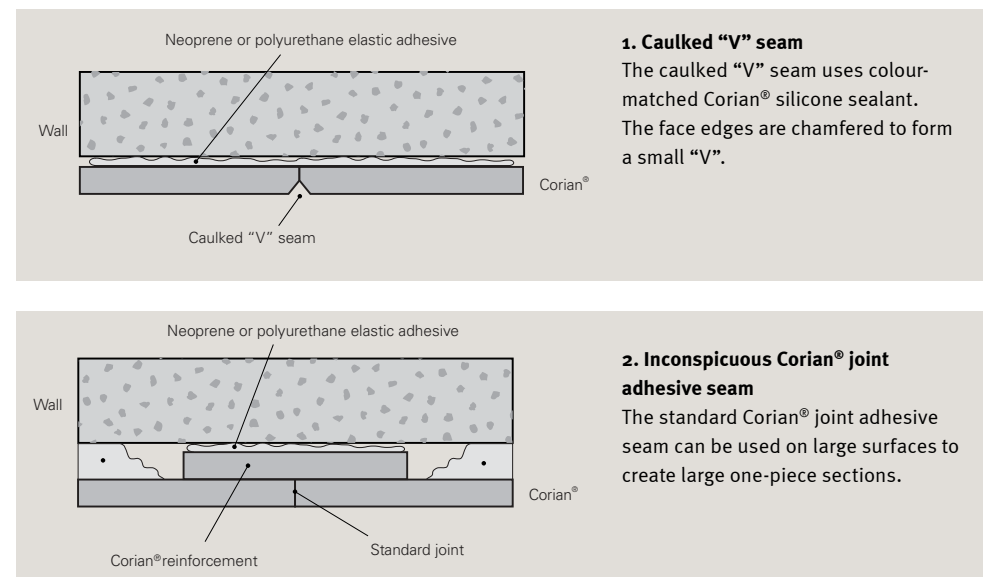
INTERIOR WALL CLADDING

Ideal supports for Corian® are:

- Water-resistant gypsum board
- Moisture-resistant plywood
- Moisture-resistant MDF
- Any sound tile surface
- Plasterboard sheeting
- Master board

When covering old tiles, remove all loose and broken tiles. All tiles must be cleaned with clear denatured alcohol prior to fixing Corian® to the surface. The installation must allow for expansion and contraction, and as a result flexible adhesives should be used.

THERE ARE TWO TYPES OF SEAMS FOR VERTICAL APPLICATIONS:



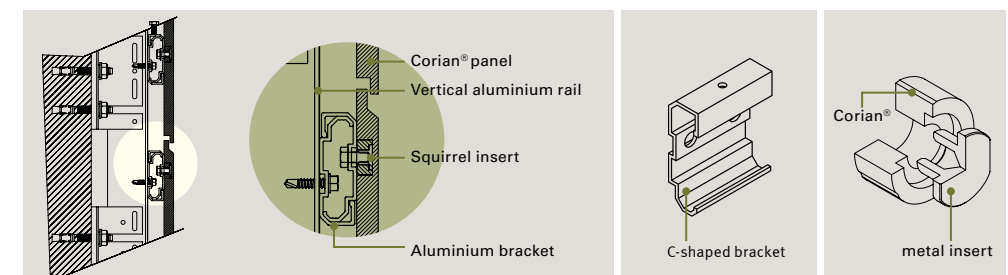
EXTERIOR WALL CLADDING

The design versatility and performance features of Corian® - the availability of different colours and aesthetics, custom colours, textures and finishes, the ability to shape and form the material, and its exceptional durability and renewability - have led a number of architects and designers to use Corian® for exterior applications. These have included street signage and benches, bus stop canopies and shop facades, and more recently even façade cladding. To satisfy this growing interest, DuPont™ has developed a testing program to evaluate the potential of Corian® for exterior applications. Please contact the local DuPont™ office for all your questions regarding commercial or residential building façades.

In general, Corian® offers good resistance to UV rays, but certain colours perform better than others in terms of weather resistance and fading. While the physical properties of Corian® are not adversely affected by outdoor exposure, surface gloss can be reduced.

Contrast between veining and background colour may be reduced and slight background colour changes may be observed over time. These changes can be removed by periodic sanding, but this refurbishing step is not always practical, such as in cases where Corian® is used for covering large architectural surfaces like building façades.

When using Corian® in exterior applications, it is especially important to mount the material on a substrate or sub-frame using a method that allows for the thermal contraction/expansion of the material.



Overlapped or open joints are located on all panel edges. The joint width depends on the thermal expansion coefficient of Corian® and the panel dimensions. The minimum horizontal width is 16 mm, and the minimum vertical width is 8 mm.

Coloured all the way through, Corian® made-to-measure panels offer easy installation. The C-shaped brackets are attached to inserts embedded in the material. They clip onto the secondary framework every 45 cm. The lifting system has to be designed carefully, as the fixing system allows a tolerance of only 1 cm for attaching each panel to the framework. The panels can be lifted by using a metal frame with suction cups, or by using a movable platform.

General disclaimer

Colour reference values and printed colours are not necessarily indicative of actual Corian® colour. Each colour represented although close to reality, should be considered purely indicative due to print limitations. Colour appearance will vary based on lighting conditions and angle of view. Corian® cannot be held responsible if the end product has a slight aesthetical difference.

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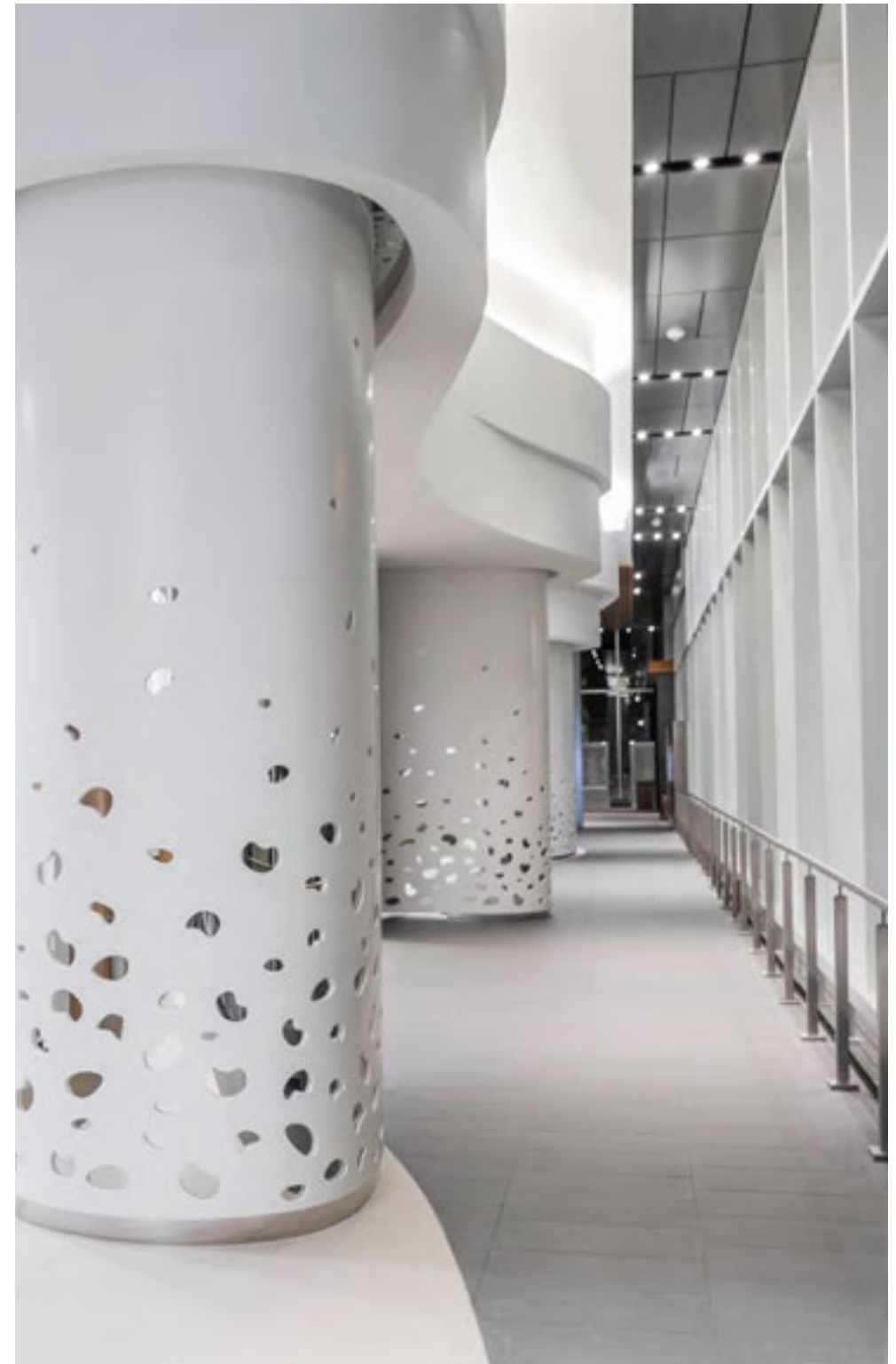
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On the cover: An initiative of the Floating City Apps foundation for deprived areas of the Third World: the "CityApps", mobile multi-functional units adopting interior wall cladding and furnishing solutions made with Corian® high-tech surface; design by Waterstudio.NL; photos by Floating City Apps foundation; all rights reserved on design and photo.



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