

# Corian® in Healthcare



DuPont™  
**CORIAN®**  
SOLID SURFACES

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*The miracles of science™*

# OUR HEALTH IS OUR MOST PRECIOUS POSSESSION AND THEREFORE DESERVES THE BEST OF CARE. DUPONT™ CORIAN® PROMISES BOTH COMFORT AND EFFECTIVENESS.

Managers of hospitals, clinics, laboratories and consulting rooms today recognise the importance for both patients and their visitors of a pleasant reception and care environment. Corian® combines an attractive appearance with effective, reliable performance, allowing it to meet both the health requirements of a medical institution (fighting against cross-infection and ensuring hygiene) and the patients' and nursing staff's need for comfort.

Thanks to its durability and the ease with which it can be repaired on site, Corian® retains its value over the years, representing a long-term investment in line with the brand image and the quality of your institution.

## The assets of Corian® in the field of medicine

### *Hygienic:*

Corian® installations are homogeneous, non-porous and free of open joints.

### *Easy to clean:*

Large work surfaces and integrated bowls without any visible joints are exceptionally easy to clean.

### *Stain resistant:*

As it is non-porous, Corian® prevents infiltration by liquids, fluids and chemical products (acids, bases and reagents).

### *Lasting and renewable:*

Corian® is extremely sturdy and able to withstand wear and tear over time. The installation can be repaired on site so that it always looks in prime condition, while keeping the extent of the work to a minimum.

### *Non-toxic:*

Corian® is an inert, non-toxic and hypoallergenic material. As such, it is used for delicate applications such as cladding the walls and work surfaces in operating areas, clean rooms and intensive care units.

In the event of fire, it has the flame-retardant properties of aluminium-tri-hydrate and does not release a single molecule of halogen gases.

### *Complies with codes and regulations:*

Corian® is an excellent choice for areas that must meet the most stringent regulatory standards, for example food-handling areas.

### *DuPont™ Corian® warranty:*

All installations fitted by a member of the DuPont Quality Network are covered by a 10-year limited installed warranty: an assurance of the quality and long-term cost-effectiveness of your investment.

The hygienic performance of Corian® has also been certified by independent German organisation LGA QualiTest GmbH.

A stringent range of tests assessing stability against bacteria and fungi, ease of cleaning and design rating from a hygiene standpoint, showed that Corian® was superior to many conventional materials used in healthcare.



# CORIAN® IN THE OPERATING THEATRE AND THE PREVENTION OF CROSS-INFECTION

## Asepsis guaranteed

In operating areas, asepsis is the top priority. The non-porosity of Corian®, its lack of open joints and the rounded corners that can be created using this material guarantee that it is extremely easy to clean, both for horizontal surfaces and for walls and specific applications.

Corian® can be used to equip new operating theatres and to renovate existing surgery units.

### **The assets of Corian® in the operating theatre:**

#### ***Premises:***

- hygienic
- extremely easy to clean and maintain
- complete absence of joints
- inner corners rounded by thermoforming
- easy to install and repair
- can be installed simply by covering existing surfaces

#### ***Surgical benches (dry and wet):***

- hygienic
- customised configuration (single, double or triple unit)

#### ***Endoscopic equipment:***

- highly resistant to aggressive substances
- prevents formation of bacteria, easy to disinfect

### **Corian® and cross-infections**

The hygienic qualities of Corian® reduce the possibility of cross-infection to a minimum in all areas requiring optimum levels of hygiene. The non-porosity of the material, together with its lack of open joints, prevents the formation of bacteria while facilitating the cleaning of the installation.



# CORIAN® IN PRIVATE CONSULTING ROOMS

Dentists, ophthalmologists, veterinary surgeons, paediatricians, pharmacists

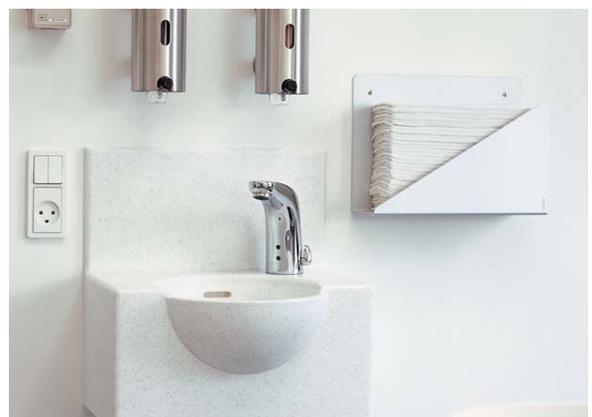
Its attractive appearance, flexibility in design and functional character are all properties that make Corian® the ideal material for private consulting rooms.

This material can be used to create large ergonomic surfaces in a single piece, thereby contributing to the clinical cleanliness required in medical consulting rooms.

Corian® is also ideal for reception areas, waiting rooms and treatment rooms in private consulting facilities, lending them an elegant homogeneity of texture and colour.

## The assets of Corian® in private consulting rooms:

- assembly with inconspicuous joints
- hampers dust gathering and the formation of mould and bacteria
- large surfaces in one piece with fitted sinks
- backsplashes and waterfall edge treatments prevent dripping
- modular, customised configuration for improved ergonomics
- hygienic, easy to clean and functional
- attractive and available in a wide choice of colours



# CORIAN® IN THE LABORATORY, NUCLEAR MEDICINE, THE HIV VIRUS, X-RAYS

## Outstanding aesthetic qualities

As is the case with all materials used in sensitive locations, Corian® has undergone numerous laboratory tests and trials designed to certify its safety for both nuclear medicine applications and for X-ray facilities or facilities that come into contact with fluids and tissue infected with the HIV virus. Test reports reveal the suitability of Corian® for this high-risk purpose.

### Corian® in nuclear medicine and X-rays

Corian® is a non-porous material that can be easily decontaminated, even at extremely high levels of radiation. Laboratory tests have shown that Corian® surfaces contaminated with very high levels of  $^{14}\text{C}$ ,  $^3\text{H}$ ,  $^{35}\text{S}$  and  $^{32}\text{S}$  radioisotopes can be very easily decontaminated using an abrasive pad. Repeated contamination/decontamination tests have yielded equally satisfying results. High levels of radioactive contamination can easily be removed from Corian® installations. Corian® is effectively cleansed of radioactive contamination by gentle sanding with fine sandpaper followed by treatment with Count-off™. Following this process, the contamination is below the levels tolerated for zones that can be accessed freely without protective equipment, and the Corian® installation shows no visual signs of discolouration or delamination.

### Corian® and HIV

Corian® can be easily cleansed of the human immune deficiency virus (HIV) that causes AIDS. Corian® does not release any products harmful to the growth of infected tissue cells and likely to adversely affect the analyses carried out in the laboratory. Tests performed by the DuPont Applied Biotechnology Group show that a Corian® surface can be cleansed of high concentrations of the HIV virus simply by rinsing with a dilute solution of bleach. A 10% solution of common bleach (0.5% sodium hypochlorite) eliminates all HIV infection from contaminated Corian® surfaces.

### Corian® in laboratories

Cleanliness is vitally important in laboratories, so the hygienic qualities and high performance levels of Corian® make it ideal for this type of application. At the same time, Corian® blends perfectly with other materials, making it both an aesthetic and functional choice. Corian® can enhance the image of your laboratory and create a more pleasant and efficient working environment.



## OTHER APPLICATIONS OF CORIAN® IN HEALTHCARE ESTABLISHMENTS

Neonatology departments, patient rooms, reception areas, restaurants, cafeterias, public washrooms, signs, etc...

Corian® provides a perfect solution for the general services in hospitals. Its elegance, its modularity and its wear resistance make it the preferred material for cladding reception areas, corridors and waiting rooms, while its hygienic qualities make it the ideal choice for public washrooms. Whether it's used in the cafeteria, the neonatology department or for a custom-designed sign system, Corian® guarantees both a hygienic environment and the comfort of patients and their visitors.



### **The assets of Corian® in other hospital environments:**

#### ***Maternity and paediatrics:***

- soft and warm to touch, providing comfort for babies and nursing staff
- workstations with fitted bathtubs at room temperature

#### ***Patient Rooms:***

- non-porous, can be assembled with inconspicuous joints, making it easy to clean and maintain
- attractive solution creating a warm and pleasant atmosphere promoting recovery
- warm and soft to touch

#### ***Reception area:***

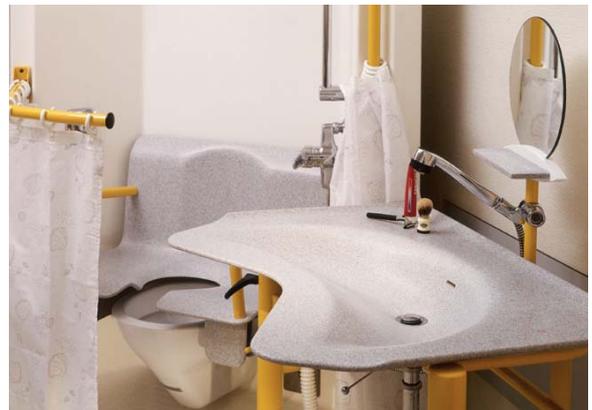
- attractive and elegant, for increased comfort
- resistant to intensive use
- thermoformable, enabling distinctive designs
- wide range of colours
- repairable

#### ***Restaurant and cafeteria:***

- non-porous and hygienic, therefore easy to clean
- enables the creation of large, customised surfaces
- containers fitted without visible joints
- meets foodstuffs standards

#### ***Washroom facilities:***

- hygienic
- easy to clean
- can be configured as required, including for the disabled
- possibility of avoiding corners



# KNOW-HOW

## WHAT IS CORIAN® ?

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Corian® is an advanced composite of aluminium-tri-hydrate and acrylic (PMMA) developed as a practical surface material for residential and commercial applications. Corian® offers design versatility, function and durability.

Supplied in sheets and shapes, it can be fabricated with conventional woodworking tools into virtually any design.

Corian® is the original solid surface material made by DuPont.

## PRODUCTION

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Corian® is manufactured by DuPont in the forms of sheets and preformed shapes, in three plants: U.S.A., Japan and Korea. Corian® sheets are produced on a continuous casting line and Corian® shapes are produced with polymerization moulds.

## BASIC GUIDELINES FOR DESIGNING WITH CORIAN®

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Thanks to the fact that Corian® is solid and homogeneous, and because it can be cut and joined inconspicuously using Corian® joint adhesive, there are virtually no size limits.

### Sheet sizes and colours

All colours of Corian® are available in 12.3 mm thickness.

About 25 colours are also available in 6 mm thickness. Some colours are also offered in other thicknesses for special applications. Standard widths are 760 mm and 930 mm. Standard length is 2490 mm for 6 mm, and 3658 mm for 12.3 mm sheets.

6 mm sheets are to be used for vertical applications only.

Corian® sheets come in different aesthetics: solid colours, speckled with different sizes of particles, veined or with metallic effect. Please consult your Corian® fabricator or representative for advice on design solutions using different aesthetics. Dark and highly saturated colours are more sensitive and may require greater maintenance depending on where they are used.

### Custom sheets

DuPont can manufacture Corian® sheets in custom colour, pattern and sizing options, within the manufacturing capability limits. Please check with your local supplier for possibilities and limitations.

### Corian® joint adhesive and Corian® silicone sealant

Corian® joint adhesive and Corian® silicone sealant are produced in a range of specific colours to coordinate with Corian® sheets and shapes.

### Corian® shapes

Corian® shapes, made with injection molds, can be blended with Corian® surfaces to create an attractive continuous look.

A wide range of vanity basins in solid colours for bathrooms and single and double sinks for kitchens, bars, hospitals and laboratories, is available for custom integration with Corian® sheets. The unique seamed undermounting technique used eliminates rims that trap dirt and water, minimizing cleaning and maintenance costs. Appropriate accessory products are available through Corian® Quality Network fabricators.

### Thermoformed shapes

A number of independent companies - members of the Corian® Quality Network - manufacture and distribute different sink and basin models. By thermoforming and gluing together pieces of Corian®, Quality Network fabricators can make practically any shape specified by designers.

These options allow architects and designers to achieve particular aesthetic effects, such as unbroken colour continuity for an entire work surface.

Thermoformed shapes made with Corian® and resulting from an additional production process on the Corian® sheet are not covered by the DuPont Warranty.

### Sheet optimization

The final cost of Corian® elements may be heavily influenced by material wastage. In order to reduce costs, DuPont suggests sheet optimization be taken into consideration during the design process via consultation with Corian® suppliers.

## ADVANCED GUIDELINES FOR DESIGNING WITH CORIAN®

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### Substructure

12.3 mm Corian® is self-supporting. Supports made of moisture-resistant MDF or moisture-resistant plywood are used on the underside of a Corian® countertop for reinforcing. Supports should be glued to Corian® using flexible silicone adhesive.

### Thermal expansion

In order to allow for thermal expansion of Corian®, a gap of at least 1.5 mm should be left at each end of the worktop and filled with Corian® Silicone Sealant. When Corian® is joined to other materials (such as glass, steel, or wood) with different thermal expansion coefficients, an elastic type of adhesive is required to let parts expand and contract freely.

### Overhangs and supports

Any overhang of 12.3 mm Corian® extending more than 300 mm, or of 6 mm Corian® extending more than 150 mm, must be supported. 12.3 mm Corian® should be supported every 600 mm; 6 mm Corian® should be supported every 300 mm.

### Inlays and Images

Inlaying Corian® with different materials or with different colours of Corian® can enhance the inherent beauty of the material. DuPont suggests avoiding large inlays with metals, because of their high thermal expansion coefficients. Logos can easily be created as inlays in Corian® by cutting the surface with a laser ray or high-pressure water jet and filling the opening with coloured acrylic resins. Inlays are not covered by the DuPont 10-Year Limited Installed Warranty. Images can also be printed on Corian® using direct printing or dye sublimation techniques. Please contact your Corian® representative for more details.

## VERTICAL SURFACES

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### Interior wall cladding

Corian® sheet must conform to the dimensions and angles of the existing wall. Ideal supports for Corian® are:

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

There are two types of seams for vertical applications:

#### 1. Caulked "V" seam.

The caulked "V" seam uses colour-matched Corian® silicone sealant and the face edges are chamfered to form a small "V".

#### 2. Inconspicuous Corian® joint adhesive seam.

A standard Corian® joint adhesive seam can be used on surfaces to create large one-piece sections.

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Top and bottom left: Plastic surgery clinic, Taiwan, design Michael Young.

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- 4th. Endoscopy unit, Corian® element with coved backsplash.

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Creation & Production - Printed in Belgium - L-XXXX-00 (02.07)

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