

altro

Designed for possibilities.
Made for people.



Floor and wall solutions for operating rooms

Floor and wall finishes that enhance hygiene and durability

Your guide to floor and wall finishes that enhance operating room hygiene and durability.





Designing for operating rooms

Operating rooms are perhaps the most complex and most important areas in a hospital. They are the profit centers of the facility, capable of earning as much \$100,000 in a single day. As such, facility managers require that the finishes used in these areas be able to perform well, even under constant use.

It is critical to select the right flooring and wall cladding for these areas, as well as the appropriate detailing to ensure a successful installation.

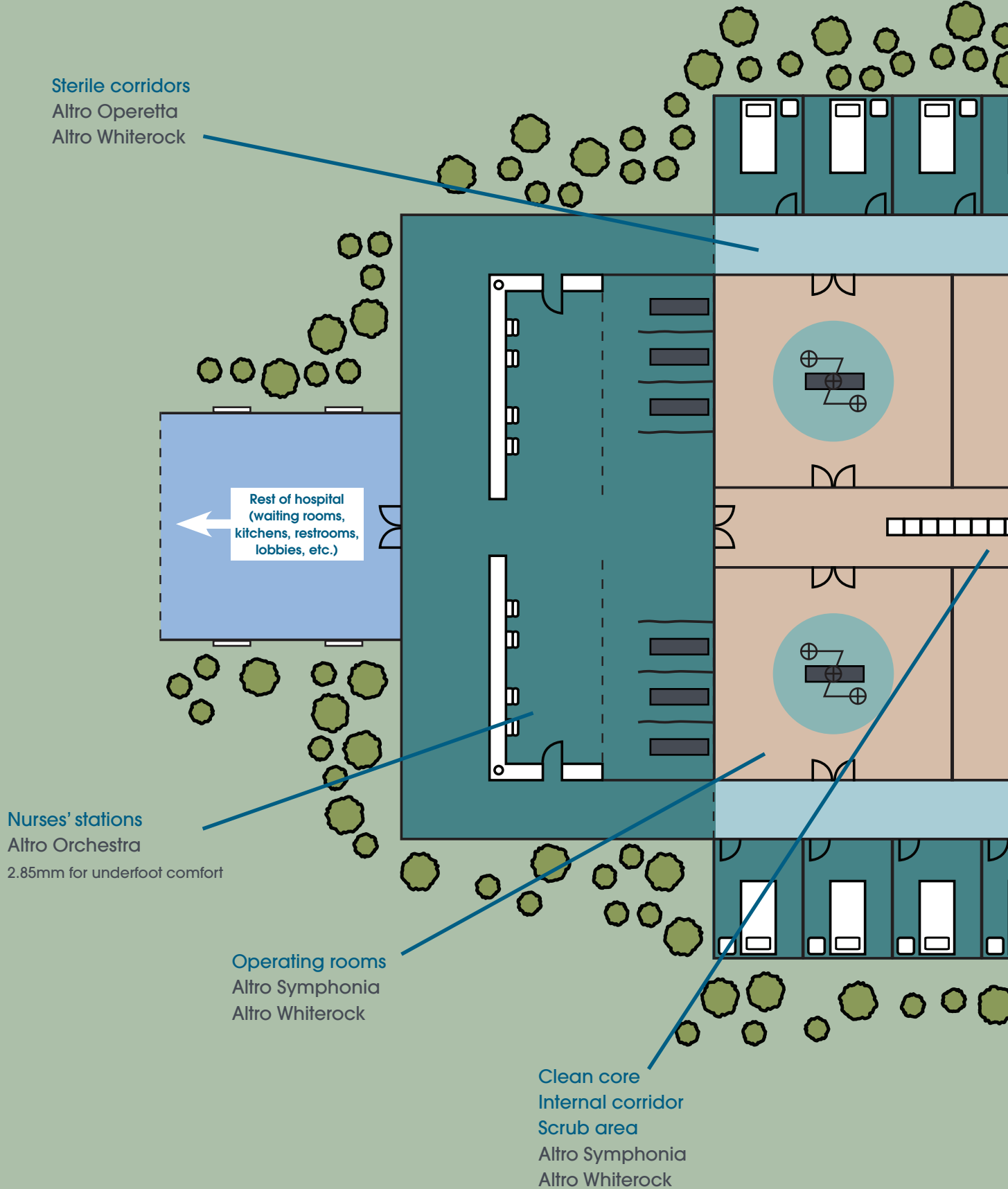
Altro is a perfect fit for these areas because our products offer:

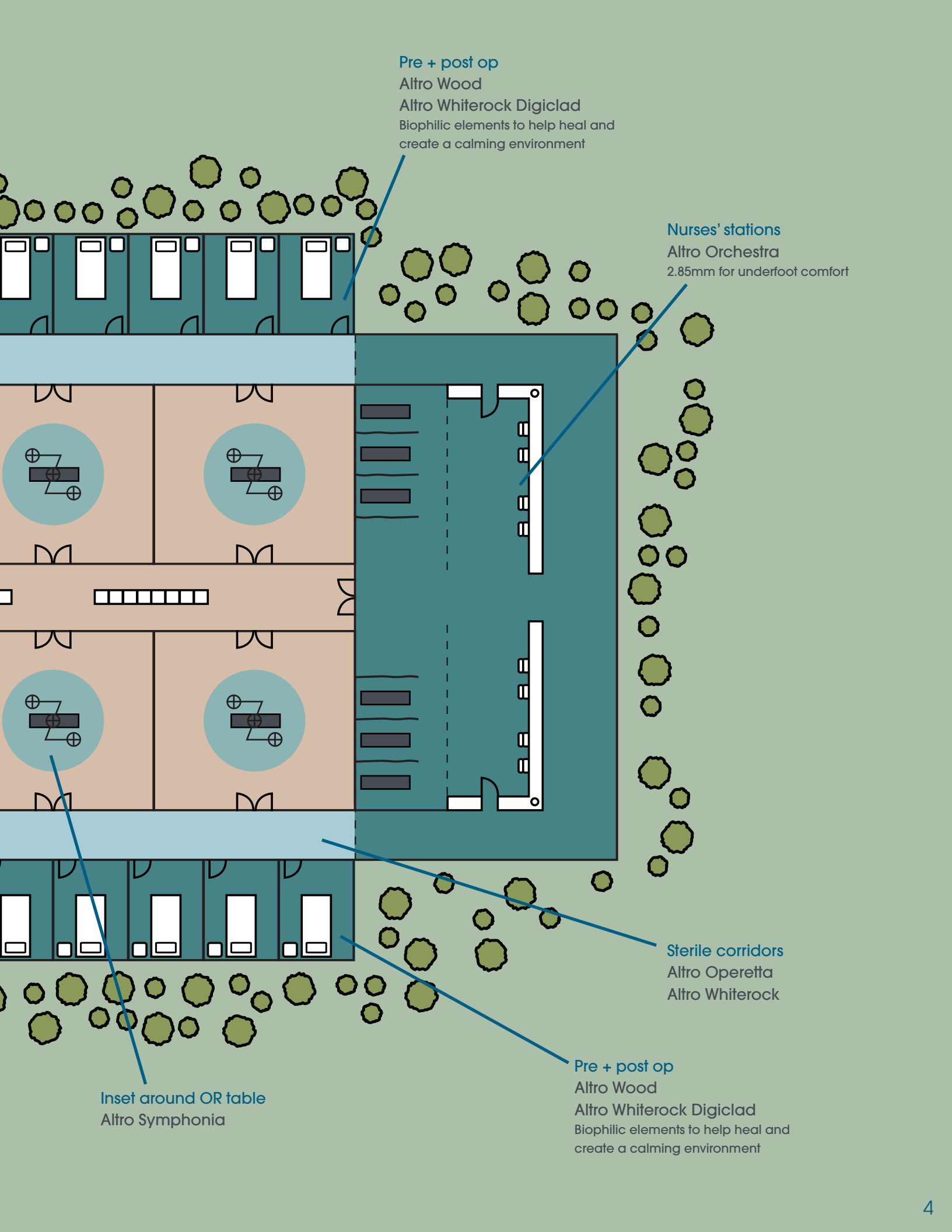
- Long-term durability
- Reduced maintenance
- Impressive value
- Safety and hygiene
- On-trend color palettes

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Surgical unit





Pre + post op
Altro Wood
Altro Whiterock Digiclad
Biophilic elements to help heal and
create a calming environment

Nurses' stations
Altro Orchestra
2.85mm for underfoot comfort

Sterile corridors
Altro Operetta
Altro Whiterock

Inset around OR table
Altro Symphonia

Pre + post op
Altro Wood
Altro Whiterock Digiclad
Biophilic elements to help heal and
create a calming environment

Meeting the mark - How do Altro products stand up to guidelines?

Engineering our products to perform well in the most demanding of situations means your installation is durable, long-lasting and meets industry standards.

American Institute of Architects

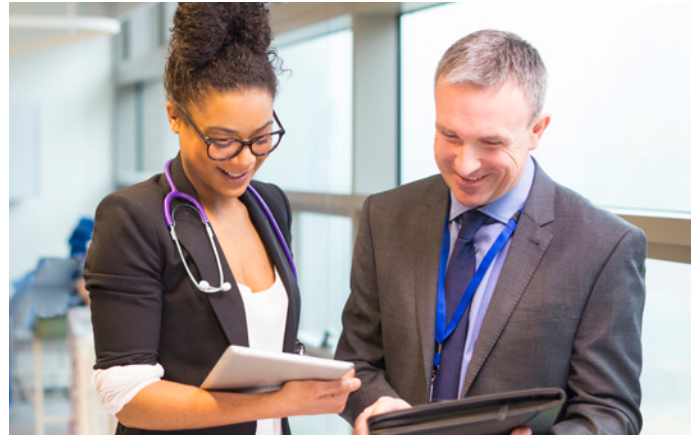
- ✓ Floor/wall should be free of fissures, open joints, crevices that may retain or permit the passage of dirt and particles.
- ✓ Seamless floor/wall finishes should be used to ensure cleanliness and minimize risk of healthcare acquired infections (HAIs).

2018 FGI Guidelines

- ✓ Flooring shall be cleanable and wear-resistant.
- ✓ Slip resistance level of floor shall be appropriate for the area of use.
- ✓ High gloss/reflective surfaces shall be avoided.
- ✓ Operating rooms shall have floor and wall base assemblies that are monolithic and have integral coved wall base up the wall a minimum of 6 inches.
- ✓ Flooring shall be unaffected by wet cleaning, germicidal, and other types of cleaning solutions.
- ✓ Walls shall be washable.
- ✓ Walls shall be free of fissures, open joints or crevices.
- ✓ Walls shall be monolithic or have sealed seams that are tight and smooth.

Additional considerations

- ✓ Indentation resistance – minimum 1,000 psi.
- ✓ Bacteria-resistant surfaces – without the addition of anti-microbials.
- ✓ Stain resistance to chemicals used in procedures, sterilization, and cleaning.
- ✓ Walls shall be impact-resistant.



CSA Z8000

- ✓ Surface material shall be resistant to microbial spread and growth.
- ✓ Floors shall be cleanable and maintainable without toxic stripping and finishing.
- ✓ Operating rooms, slip-resistant flooring shall be provided.
- ✓ The floors and wall bases of all operating rooms and any delivery rooms used for cesarean deliveries shall be monolithic.
- ✓ In operating rooms, cesarean delivery rooms, airborne isolation rooms, and sterile processing rooms, wall finishes shall be free of fissures, open joints, or crevices that can retain or permit passage of dirt particles.
- ✓ Wall finishes shall be washable.

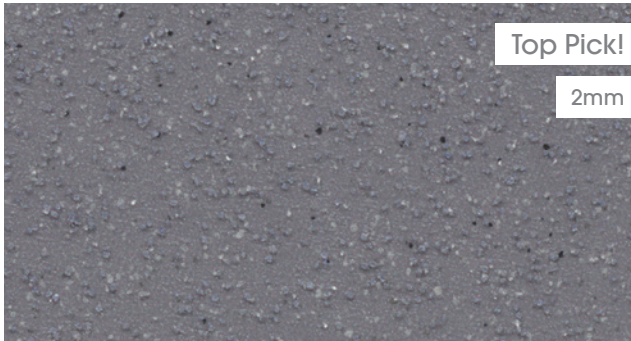
Pharmacopeia - USP 800 (USA) + NAPRA (CAN)

The US + Canadian Pharmacopeia - USP 800 and NAPRA also have many regulations which may apply to ORs in the future. While many of these overlap with the FGI guidelines, there are additional guidelines that must be addressed. These guidelines are mandatory on a state and federal level and failure to comply can lead to costly shutdowns.

- ✓ Flooring cap should be avoided – smooth floor to wall transitions such as overlap or heat-weld methods are preferred.
- ✓ Preferably floors are overlaid with wide sheet vinyl flooring with heat-welded seams.
- ✓ Particle emission must meet ISO Class 5 and lower.

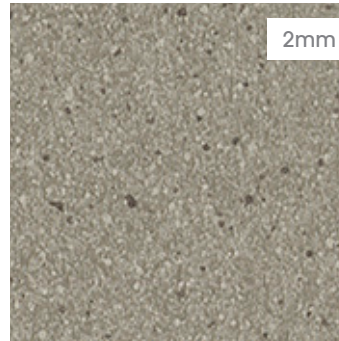
Top Altro picks for Operating Rooms

Flooring



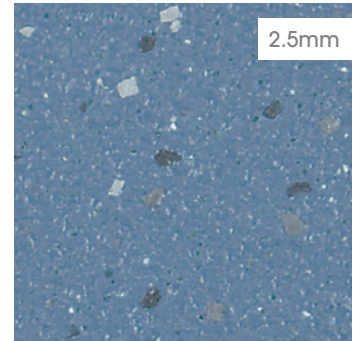
Altro Symphonia

An innovative blend of smooth and slip-resistant engineering with enhanced stain resistance. High PSI values and easy cleanability — a perfect fit for ORs.



Altro Operetta

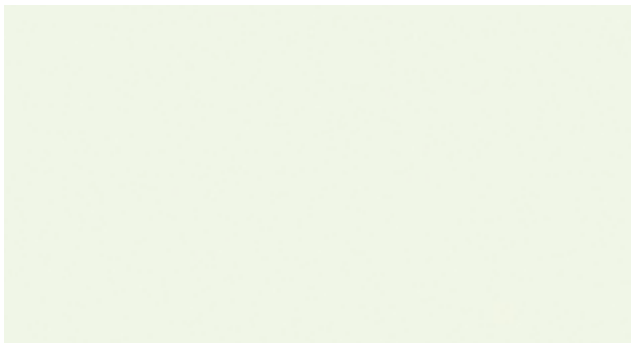
Smooth, easy-to-clean compact sheet vinyl



Altro Reliance 25

Heavy-duty, slip-resistant sheet vinyl

Walls



Altro Whiterock

Hygienic wall paneling system.



Altro Whiterock in an operating room



Digitally printed wall cladding

Custom printed Altro Whiterock panels

See our digitally printed wall cladding brochure for more information.



Altro Whiterock wall designs

Designer patterns on durable wall panels



Altro Whiterock Whiteboard

Add dry erase film to any of our wall products

Altro Symphonia™

Smooth sheet flooring with added slip resistance

Altro Symphonia is the top choice flooring in ORs, boasting an expansive color palette and impressive stain resistance.

Smooth to the touch and easy to clean, Altro Symphonia satisfies ISO Cleanroom standards while providing safety underfoot during long, extensive surgeries.

The product is impervious, free from cracks and crevices, and non-shedding. Featuring a revolutionary new stain-resisting technology, Altro ShieldTec, teamed with our tried-and-true Altro EasyClean formulation.

Combine with Altro Whiterock wall panels for areas requiring a seamless, floor-to-ceiling hygienic surface.

- ✓ 2mm thick
- ✓ 2m wide
- ✓ Withstands 2000 psi
- ✓ 10-year warranty
- ✓ Betadine-resistant even after 24 hours
- ✓ Stain-resistant
- ✓ Low-VOC emitting
- ✓ Meets ISO Class 4 cleanroom requirements
- ✓ Non-toxic, non-polluting, no heavy metals



Scan the QR code to see the full product page on [altro.com](https://www.altro.com)

floors



Introducing Altro ShieldTec technology



Revolutionary advancements in the manufacturing process of Altro Symphonia have now allowed us to produce our most stain-resistant technology to date.

Altro ShieldTec delivers industry-leading commercial performance in key attribute areas like stain resistance, chemical resistance, and abrasion resistance.

- Revolutionary stain resistance
- Industry-leading cleanability
- Exceptional chemical + abrasion resistance
- Long-term durability and color retention
- Lifetime maintenance cost savings
- Sustained long-term slip resistance

*Altro suggests that customers perform a comprehensive stain evaluation using anticipated cleaning products and cleaning procedures used within their facilities prior to choosing and installing Altro Symphonia.



Altro Whiterock™

Complete, hygienic wall paneling system

Altro Whiterock provides the ideal wall cladding solution for modern ORs. Our heat-formable panels may be installed seamlessly to prevent cracks, gaps and fissures — maintaining the integrity of the encapsulated system.

This installation method create a smooth, seamless surface that prevents the harboring of bacteria.

Altro Whiterock's smooth, durable, hygienic, and easy-to-clean surface can help you meet demanding regulatory requirements, and minimize OR downtime between surgeries — with no surprises along the way.

- ✓ 2.5mm thick
- ✓ 4' x 8'2" and 4' x 9'10" panels
- ✓ 20-year warranty
- ✓ Stain-resistant
- ✓ Impact-resistant
- ✓ Low-VOC emitting
- ✓ Meets ISO Class 2 cleanroom requirements



Scan the QR code to see the full product page on altro.com

walls





An integrated floor and wall solution

Altro floors and walls act as an integrated solution, which means it fits together perfectly to provide a hygienic surface — ideal for designing a sterile field. This doesn't just offer the best possible protection against bacteria and contamination; it makes cleaning easy too.

Easy to clean

Effective detailing + accessories

Fully sealed

Thermoformed on site

Heat welded joints

High impact resistance

Easy to keep clean

Together, our products provide a robust, hard-wearing surface that resists stains, odors and chemicals. PVC is non-porous, non-shedding, and has very high impact resistance, preventing damage that can trap bacteria compared to traditional surfaces.

Fully sealed

Altro Whiterock is a fully-bonded system with hygienic sealed edges, abutments and joints. It can even be sealed around fixtures and fittings.

When joined together with Altro flooring, they form a watertight covering - from floor to ceiling.

Thermoforming

Because our wall panels can be molded around corners on site, they form an uninterrupted surface that's resistant to impact and damage. There's no need for unsightly corner trims which can form potential dirt traps that are difficult to access and clean.

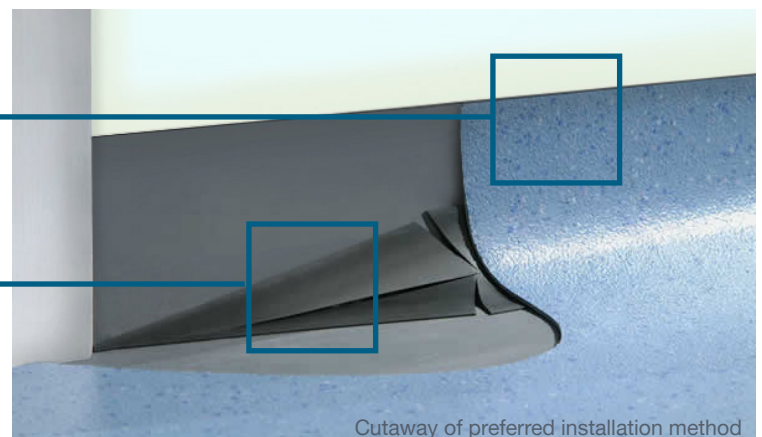
Thermoformed corners
No unsightly trims

Heat welded joints
Fully-sealed, seamless joining



Wall overlaps floor
Preferred installation

Cove stick
For a seamless transition



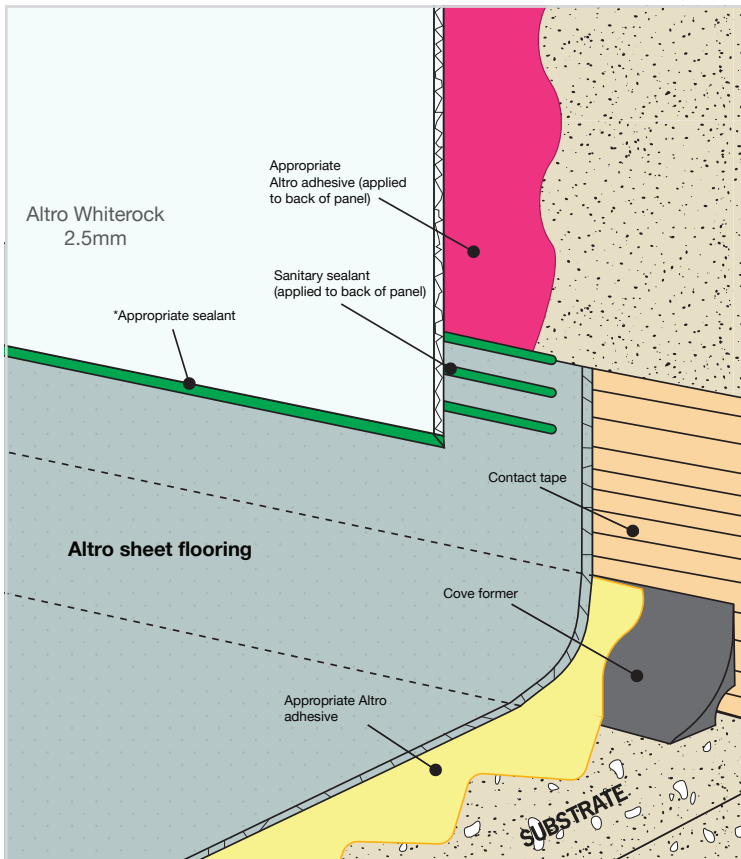
Floor to wall transitions

Proper installation is paramount to maintain a pristine, hygienic operating room. Altro has developed various joining methods between different surfaces which allow for hygienic construction in a variety of environments.

Our panels may be joined together and integrate with flooring in a variety of ways. Our most popular techniques for healthcare include:

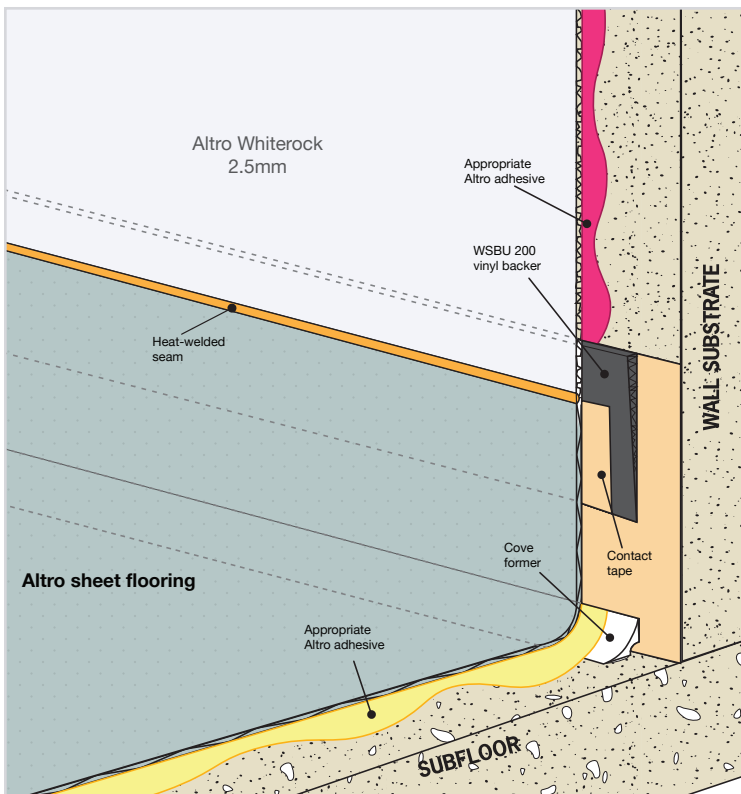
- Overlap method
- Heat weld method

For more information on our various installation techniques please visit our website.



Shown: Overlap method (preferred)

This installation technique is easier to install versus a heat-welded transition and offers enhanced security over water ingress. The overlap detail is an acceptable detail in most applications.



The key to proper heat welding at this floor to wall panel juncture is to have a solid backing behind the wall panel and flooring at this seam location. This is accomplished by using the Altro WSBU 200 vinyl backer.

Did you know we also have 3D mockups of our products? See them today on altro.com



Altro Operetta™

Smooth sheet flooring

Altro Operetta is a robust floor perfect for medium to high traffic areas. Its smooth profile is ISO cleanroom compliant, and provides excellent stain resistance with a surface that can be easily cleaned and maintained.

The product boasts a surface profile that is smooth, impervious, free from cracks and crevices, and non-shedding. Built with Altro Easyclean surface technology, Altro Operetta is resistant to disinfectant and other cleaning agents.

Combine with Altro Whiterock wall panels for areas requiring a seamless, floor-to-ceiling hygienic surface.

- ✓ 2mm thick
- ✓ Smooth surface, easy-to-clean
- ✓ Withstands 2000 psi
- ✓ 10-year warranty
- ✓ Stain-resistant
- ✓ Low-VOC emitting
- ✓ Meets ISO Class 4 cleanroom requirement



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floors





Altro Reliance™ 25

Robust slip-resistant flooring

At 2.5mm thick, Altro Reliance 25 combines proven stain resistance, slip resistance and incredible durability to create a surface capable of enduring high levels of foot and wheeled traffic without compromising performance.

This product is a premium choice in heavy-duty commercial flooring, offering the best slip resistance of our OR solutions.

Altro Reliance 25 provides a great alternative to resinous floors, provides durability and slip resistance but will not need to be re-coated and will not crack.

- ✓ 2.5mm thick
- ✓ 2m wide
- ✓ Slip-resistant
- ✓ Withstands 2000 psi
- ✓ 15-year warranty
- ✓ Stain-resistant
- ✓ Low-VOC emitting
- ✓ Great alternative to epoxy



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floors





Digitally printed wall cladding

A growing trend with pediatrics as well as other areas is to add more natural images into the surgical areas. This concept, called biophilic design, is proven to reduce stress, improve our well-being, and expedite healing.

Digitally printed wall panels from Altro allow you to reproduce images and artwork onto Altro Whiterock wall panels to create durable, vibrant design options for a variety of applications. With Altro Whiterock Digiclad and Altro Whiterock PopArt ranges you can choose from our standard gallery or supply your own image that can easily adapt to your design's specific needs.

- ✓ Fully hygienic, sealed system
- ✓ Made in the USA
- ✓ Inspirational biophilic images
- ✓ Infinite possibilities



Learn more about the completely custom digitally printed wall cladding process in the brochure or ask your local sales rep.



Scan the QR code to see the full brochure on altro.com

walls



Altro Whiterock™ Whiteboard

The use of a whiteboard during the “time out” before surgery can significantly improve memory retention among members of the surgical team.

A surgical pause or “time out” performed before any operative procedure is a major component of the Joint Commission’s Universal Protocol to prevent wrong site, wrong procedure, and wrong person surgery. Retention of information presented during the surgical pause is essential, making wall mounted note boards a vital tool in operating rooms.

Altro Whiterock can be treated with our Whiteboard film technology allowing it to be used as a dry erase board. This treatment can be applied to one panel allowing it to be heat-welded to the others in the surgical suite.

- ✓ Blends durability of Altro Whiterock with the versatility of a dry erase board
- ✓ Integrates with other Altro wall products, allowing designated areas to be dry erase surfaced
- ✓ Installation tip - Heat weld to the perimeter of the Altro Whiterock Whiteboard with a dark or contrasting weldrod to specify areas with dry erase capability

i Did you know?

Studies have shown that the surgeons who used a whiteboard retained as much as 23% more information than those who relied on verbal cues.



Scan the QR code to see the full product page on altro.com

walls





Fast track renovations with Altro EcoFix+ adhesive

We realize that the ORs are the lifeblood of a hospital's profit center. When a single room can generate as much as \$100,000 worth of revenue per day, lengthy shutdowns to install new floors are not acceptable.

With our new Altro EcoFix+ adhesive we are able to do faster renovations and allow for rooms to be open as quickly as 48 hrs after installation.



Altro EcoFix+ transitional pressure sensitive adhesive (TPSA) goes above and beyond by withstanding severe moisture and alkalinity. Offering the upfront benefits of a TPSA, it quickly transitions into a hard-set to securely lock your flooring in place.

With its aggressive, fast-grab design, Altro EcoFix+ handles the pressure of heavy rolling loads with ease and is suitable adhesive for resilient flooring.

Features + benefits

- ✓ Low VOC, 14gPL
- ✓ Extremely low odor
- ✓ High moisture tolerance
- ✓ Permanent, high-strength elastomeric bond
- ✓ Ideal for heavy rolling loads
- ✓ Immediate access for light traffic when used as a PSA, 12 hours when used as a wet set
- ✓ Aggressive tack, fast grab
- ✓ Non-flammable

Staining

OR floors and walls are consistently exposed to aggressive chemicals. Antiseptics such as Betadine®, Preempt RTU™, Isopropyl alcohol and bleach as well as industrial cleaners can cause havoc on many surfaces if allowed to sit. Therefore it's critical to specify flooring that has high stain resistance in ORs.

With so many different cleaners and disinfectants on the market it is hard to test every chemical. However, it is our experience that the vast majority of chemicals are made with either:

- Hydrogen peroxide
- Bleach
- Isopropyl alcohol

The test reports to the right confirm demonstrate how Altro floors and walls perform against these chemicals.

Altro ShieldTec technology

Revolutionary advancements in the manufacturing process of Altro Symphonia have now allowed us to produce our most stain-resistant technology to date. Altro ShieldTec delivers industry-leading commercial performance in key attribute areas like; stain resistance, chemical resistance, and abrasion resistance.

Altro ShieldTec teamed with our tried-and-true Altro Easyclean Technology, will provide you with industry-leading commercial flooring performance.

Confidence to install the lightest of colors in any situation and peace of mind that they will stay that way are now possible with Altro Symphonia.



See Altro ShieldTec at work in our stain test video.



Please note: Altro suggests that customers perform a comprehensive stain evaluation using anticipated cleaning products and cleaning procedures used within their facilities prior to choosing and installing Altro Symphonia.

Altro Symphonia

Chemical	Chemical resistance	Stain resistance after 24 hrs
Preempt RTU™ (hydrogen peroxide based)	0	1
Bleach	0	0
Isopropyl alcohol	0	0
Betadine® (Povidone-iodine 10%)	0	0

Altro Operetta + Altro Reliance 25 stain results

Chemical	Chemical resistance	Stain resistance after 24 hrs
Preempt RTU™ (hydrogen peroxide based)	0	1
Bleach	0	0
Isopropyl alcohol	0	0
Betadine® (Povidone-iodine 10%)	0	1

Altro Whiterock stain results

Chemical	Chemical resistance	Stain resistance after 24 hrs
Preempt RTU™ (hydrogen peroxide based)	0	0
Bleach	0	0
Isopropyl alcohol	0	0
Betadine® (Povidone-iodine 10%)	0	0

Full reports are available on altro.com

Independent 3rd party laboratory results available through our Altro ShieldTec flyer at altro.com





Cleaning

Proper cleaning is essential to keeping a facility hygienic no matter which interior finishes are selected. We highly recommend that a cleaning and sanitizing program is created specific to your facility that utilizes the resources and products as recommend by individual manufacturers.

Our cleaning guidelines are available at [altro.com](https://www.altro.com)

Samples

Altro recommends that color selection is never made through printed or digital materials. Please order a physical sample for color and pattern approval before placing your order with us.

Order samples 24 hours a day at [altro.com](https://www.altro.com) or find us on Material Bank.



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