



DESIGNING HEALING ENVIRONMENTS

INTRODUCTION

21st century healthcare facilities must provide a high quality of patient care while reducing operating costs, lowering their impact on the environment and striving to humanise healthcare in a highly medicalised environment. They must adapt quickly to a rapidly changing world, characterised by an ageing population, evolutions in innovative technology, the rise of chronic diseases and an increased need for outpatient care. Indeed, as the population ages, healthcare facilities will need to support more people with age-related conditions and diseases, including dementia.

When designing a healthcare facility, it is vital to take all these factors into account. Good design can be cost-effective and helps to both improve patients' experience and enhance hospital employee's quality of life.

The aim of this guide is to help you in your choice of flooring for modern healthcare facilities, and to demonstrate that it is possible to design a people-friendly clinical environment without compromising on hygiene or efficiency.

Upward pressure on health spending comes from new technology in medical services, rising incomes driving higher expectations, and the growing needs of ageing populations.¹

WHAT MAKES A GOOD HEALING ENVIRONMENT?

Studies show that a hospital's environment can play a significant role in enhancing patient's experience, accelerating recovery and promoting wellbeing. A well designed environment also delivers economic benefits through cost savings related to improving patient outcomes and reducing their length of stay, boosting staff productivity and attracting and retaining talent. Healing design elements that help to strengthen patient's ability to cope and recover:

- Links with nature
- People-friendly spaces with a welcoming feel
- A calm environment free from excessive noise
- Strong infection control
- Good acoustics

By 2050, 1/3 people will be over 65 years old.²



USING COLOUR TO CREATE HEALING ENVIRONMENTS

Colour plays a major role in creating effective healing environments. It can help to enhance patient's perception, spatial orientation and sense of surroundings. Colourful designs also make for attractive areas that provide a reassuring and welcoming atmosphere for patients, visitors and staff. Designing with a dedicated palette of colours can help to promote wellbeing and integrate elements of the natural world, and favours effective interaction between people.

Humanise:

Introducing a range of warm colours with reassuring, sensitive harmonies helps to put patients at ease. Soft, gentle tones can have a smoothing effect in the case of long stays, helping to create a homely atmosphere.

Additionally, colour can be used to identify different spaces, while patterns in high traffic areas also helps with orientation, improving safety by making it easier for people to find their way.



Integrating Nature:

Environments that incorporate the principles of biophilia (human's innate tendency to seek connections with nature) within their design offer substantial healing benefits. Integrating nature into healthcare design can take many forms, including large windows, nature-themed pictures and natural elements.

The use of nature-inspired colour palettes can also contribute to promoting a safe healing environment.



Connection:

This design embodies a simple, refined and rational contemporary style that reflects the advanced nature of the care offered, white humanising the experience of being in a hospital. This is achieved by combining pure, smoothing straight lines with the reassuring curves of organic forms. White is used undiluted and associated with more formal colours to further strengthen the effect.



ENSURING PATIENT COMFORT

A healthy, people-friendly indoor environment can contribute to a positive patient experience and a more rapid recovery. Natural light, views of nature, art, quiet and clean patient rooms are all part of what the experts call the 'healing environment'.

Creating a Quiet Environment:

Noise can be a highly negative environmental factor in hospitals. Studies show that it can increase patients' peception of pain and their consequent use of medication, and result in sleep deprivation and patient confusion. It may even increase the length of their hospital stay. From a design perspective, it is important to pay particular attention to corridors serving patients rooms and intensive care units.

Our Recommendation:

- Choose flexible flooring over tiling. Ceramic tiles reflect sound to add to the general noise, whereas flexible flooring absorbs sound, keeping it at a comfortable level.
- Identify optimal **acoustic solutions for rooms with high noise levels**, while ensuring easy movement of medical beds.

The decibel level at a typical hospital during the day has risen from 57 in 1960 to 72 in 2005.³

Reducing the Institutional Feeling:

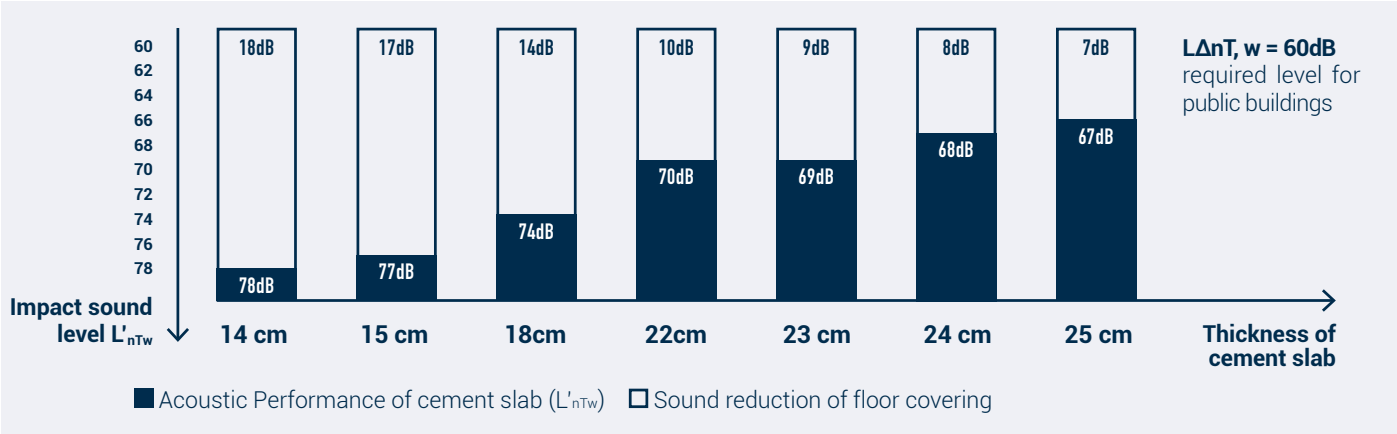
In patient rooms as well as in large spaces and common areas, it is important to avoid the institutional feeling of the 'clinical environment', which can lead to stress and anxiety. Patients should not feel a sense of stigma linked to their stay in hospital.

Our Recommendation:

- An appropriate use of colours, designs, textures will help to create a warm, stimulating and reassuring environment.
- Select durable, easy-to-maintain flooring, as cleanliness is important.
- Add wall protection to ensure the environment does not look damaged over time.

HOW FLOORING CONTRIBUTES TO IMPROVED ACOUSTIC COMFORT

Materials and finishes selected for ceilings, wall and flooring all have an impact on the acoustic environment. As shown in the graph below, the thickness of the concrete slab has an effect on acoustic performance. It is important to consider this when assessing the level of sound-proofing required from the flooring.



INDICATIVE FOOTFALL NOISE FLOORING CATEGORY

	TARKETT SOLUTIONS	ACOUSTICAL IMPROVEMENT (NFS31-074)
Vinyl on foam backing	Tapiflex / iQ Acoustic	Class A < 65 dB
Vinyl compact	Acczent / iQ	Class C < 85 dB
Ceramics	-	Class D ≥ 85 dB

ENCOURAGING MOBILITY

Patient mobility in an ageing population is crucial to the recovery process. An early return to mobility can improve patient outcomes and decrease the length of their stay in hospital, studies reveal. Designing supportive environments that increase spatial perception and enhance cognitive function can play a vital part in helping patients to find their way and improving their overall experience. It will be increasingly important to address these issues in a considered and sensitive way, as healthcare facilities support a growing number of elderly people with sight loss or dementia.

Almost half of all hospital patients are over the age of 65⁴, and older patients can lose 5% of muscle strength per day in a hospital bed.⁵

Enhancing Visual Comfort:

With elderly people forming a significant and growing group of the hospital population, it is vital to consider the experience of people with sight loss when designing a healthcare facility. Colour contrast is central to providing visual clues for doors, handles, controls and furniture, enabling people with diminished sight to better make sense of their surroundings.

Our Recommendation:

- Ensure **at least a 30-point Light Reflectant Value (LRV) difference between adjacent critical surfaces** such as flooring and walls, flooring and furniture, and wall and handrail.
- Do not exceed a **10-point LRV differential between two adjacent floor surfaces**, in order to avoid the illusion of a step.
- Use flooring with a **matt finish to prevent glare**.

Helping Patients to Find Their Way:

Developing design strategies to help patients and their families find their way in complex healthcare settings can help to alleviate stress, both among patients and their families. In addition, it helps the hospital to function more effectively, and promotes visitor accessibility and safety.

Our Recommendation:

- Choose flooring colours to create **colour coding to help identify and differentiate key spaces**.
- Patient friendly signage is crucial. **Effective signage should be recognisable**, concise and clearly visible to all. Floor customisation can be used for signage.



USING LIGHT REFLECTANT VALUE AND COLOUR CONTRAST EFFECTIVELY IN DESIGN

Harnessing the light reflectant value (LRV) efficiently helps to quantify the visible and usable light reflected by surfaces illuminated by a light source on a scale from 0 to 100, where 0 absorbs light completely (black) and 100 reflects light perfectly (white). When designing for people with sight loss, it is important to take the LRV of large surfaces such as the floor, walls and ceiling into account, creating an optimum contrast that will help people to see their surroundings more clearly.

	SPACE	LIGHTING INTENSITY (LUX)	MINIMAL LRV DIFFERENCE BETWEEN FLOORS AND WALLS
Corridors	300		
Patient room Ambient	250		
Patient room Reading area	300		
Bathroom	250		
Operating theatre Ambient	2,000		
Operating theatre Surgery field	>10,000		
			30 POINTS



HELPING TO REDUCE THE RISK OF HEALTHCARE ASSOCIATED INFECTIONS

Managing and preventing the spread of infection is a major challenge for all Healthcare facilities. In fact, infections associated with healthcare or developed within healthcare settings are rated as the most frequent adverse outcome in healthcare delivery worldwide. Therefore, it is vital to evaluate the level of risk posed by diverse areas of a healthcare facility, and reduce the risk of infection through optimal design choices.

Each year in Australia 180,000 patients suffer healthcare associated infections that prolong hospital stay and consume 2 million hospital bed days.⁶

Choosing “Easy to Clean” Materials:

Infections are largely transmitted through the air, human contact and medical equipment. Even though the physical environment is not a primary source of contamination, a good choice of materials can help to control infection more efficiently.

Our Recommendation:

- Opt for sheets of vinyl flooring, **joined by hot welding rods.**
- To ensure **efficient cleaning and high hygienic standards in areas where there is a high risk of infection**, flooring and walls must be:
 - Sealed, smooth, with an impervious surface and minimal joints
 - Perfectly watertight
 - Compatible with cleaning chemicals and frequent disinfection procedures

Opting for Low Emitting Products:

Indoor air contains millions of pollutant particles, from fine dust to microbes, which can lead to the spreading of infection. HVAC plays an important role. Similarly, the choice of materials and surfaces in clean rooms also matters in terms of reducing the number of airborne particles.

Our Recommendation:

- Choose floors manufactured with low VOC levels
- For critical areas such as operating theatres, **seek floor and wall coverings certified by a third party.**

SELECTING THE APPROPRIATE MATERIALS ACCORDING TO THE RISK OF INFECTION

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INFECTIOUS RISK LEVEL (NF S 90-351)	1 LOW RISK NO INVASIVE PRACTICE	2 MODERATE RISK INVASIVE PRACTICE NOT CONNECTED WITH THE ENVIRONMENT	3 SERIOUS RISK INVASIVE PRACTICE WITH RISK LINKED TO THE ENVIRONMENT	4 VERY HIGH RISK HIGH RISK INVASIVE PRACTICE
Area / room	Entrance corridor / stairs / laundry / waiting room / consulting room / bedroom / wetroom / psychiatry / medical aged care home / administration / offices / technical logistic services...	Maternity, nursery, endoscopy, hemodialysis, recovery room, intensive care, sterilization, sterilized material storage, autopsy room...	Emergency, operating theatre, childbirth rooms, laboratory, graft department, radiology with functional exploration...	High risk operating theatre (orthopedic implant, burn...), burns unit, hematology, pharmacy (sensitive preparation)
Material to use	Easy to clean Reduces soiling	Easy to clean Reduces soiling	Watertight / decontaminable / disinfectable / low particle emission	Watertight / decontaminable / disinfectable / low particle emission
Microbiological class (maximum concentration of alive particles – unit forming a colony – per cubic meter)	–	B100 (100 UFC/m3)	B10 (10 UFC/m3)	B10 (10 UFC/m3)
Particle class	–	8	7	6 – 5
Cleaning frequency	Daily	Daily	After each operation	After each operation



CARING FOR CAREGIVERS

Working in healthcare facilities is both mentally and physically demanding. A positive working environment can help reduce stress and fatigue. In particular, selecting appropriate flooring can help to perform physical tasks - such as rolling beds, trolleys and heavy rolling loads - more easily.

Manual handling and slip-trips-and-falls are the two main accident triggers in the healthcare sector.⁷

Facilitating the Moving of Rolling Loads:

In corridors and common areas, the floor should offer a low rolling resistance in order to allow an effortless movement of medical furniture and heavy rolling load.

Our Recommendation:

- Choose a floor with a good “indentation to acoustic ratio” especially for corridors serving patient rooms.

Preventing Falls:

Slips, trips and falls are one of the most common cause of serious injuries at work. Some areas pose particularly high risks, such as those with frequent water spillages.

Our Recommendation:

- Choose flooring with slip resistance suitable to the specific use case. Refer to handbook 198 for slip rating recommendations.

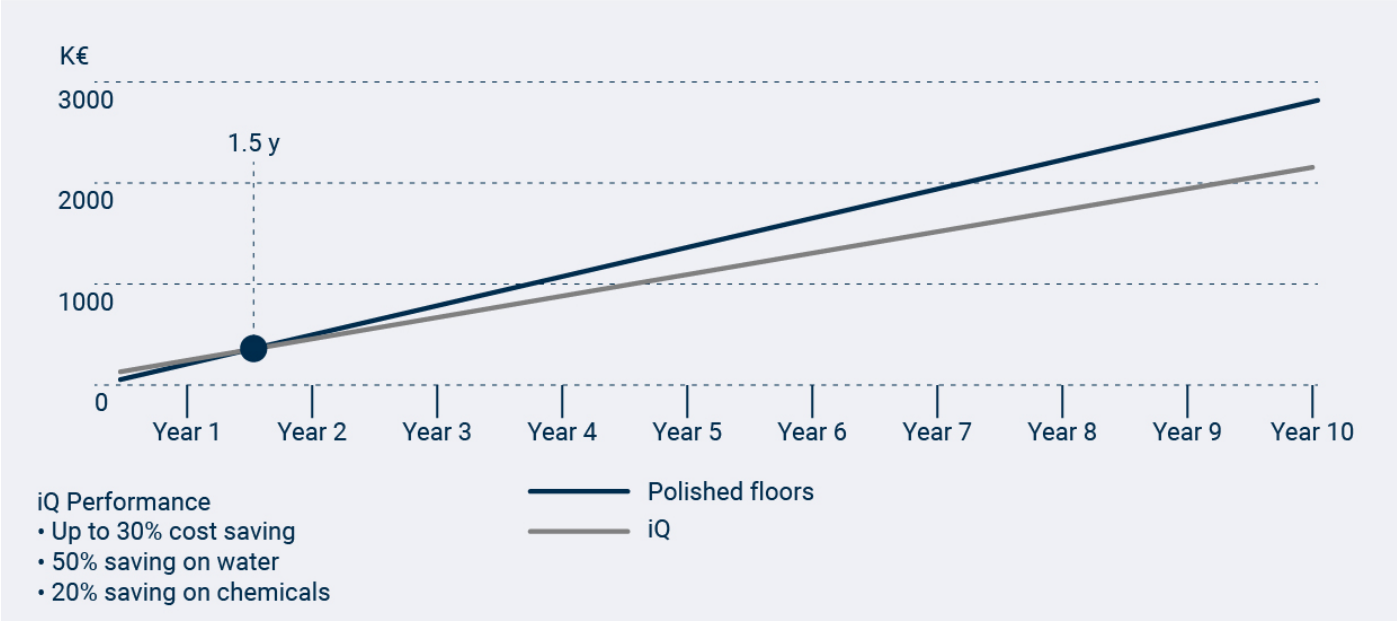
MEETING SLIP RESISTANCE STANDARDS REQUIREMENTS FOR FLOORING IN WET AREAS

A pedestrian surface is considered to be slip resistant if the available surface friction is sufficient to enable a person to traverse that surface without an unreasonable risk of slipping.

STANDARDS		STANDARD REQUIREMENT
Barefoot areas Showers rooms Lockers	DIN 51097	Class A (occasional water protection): angle > 12°
		Class B (shower room - changing room): angle > 18°
		Class C (constanty under water): angle > 24°
Wearfoot area Kitchens Lavatories Workshops	EN 13845 Annex C	Esb: angle > 15°
	DIN 51130	R10: Occasional water spillages
		R11: Water and viscous spillages
	BS7976 Part 2 = TRRL Pendulum 4S (wet)	> 36°
	Surface roughness rz	> 20 µm
EN 13845 Annex C		Esb: angle > 20°



COMPARE FLOORING COSTS WITH LCC



OPTIMISING MAINTENANCE OPERATIONS

Since flooring has to withstand high traffic, spills, shocks and bumps, particular attention should be paid to the durability of materials and ease of cleaning. Product lifespan, maintenance requirements and costs are key considerations for any flooring decision.



Less than **10%** of the total cost is represented by purchase and installation.



90% of the total cost is related to cleaning and maintenance.

Analyse Life-Cycle Cost:

Maintenance plays a major role in the cost of ownership of flooring, with life-cycle cost analysis revealing that 90% of total costs relate to cleaning and maintenance. The purchase and installation represent less than 10% of these costs.

Choose Durable Solutions:

Flooring in healthcare facilities undergoes substantial use, through high footfall, heavy medical equipment (automated guided vehicles, imaging equipment) and frequent decontamination. The durability of the flooring material used is crucial to avoid frequent renovations, which are disruptive and can be challenging to manage in busy, heavily used areas.

Our Recommendation:

- Choose flooring with highly resistant surface treatment, in order to reduce cleaning costs and the environmental impact with less use of chemicals, water and electricity.
- Tarkett LCC software can provide customers with an estimate of the total cost for the cleaning and maintenance of our products
- Pay close attention to maintenance needs when specifying flooring. Don't overspecify and use safety flooring when it is not needed.

Our Recommendation:

- Select products that will endure for the long term, **provide consistent long-term performance, offering ease of installation, outstanding durability and low life-cycle costs.**

CONTRIBUTING TO GOOD INDOOR AIR QUALITY

Many people may be at greater risk of developing health issues when exposed to indoor, rather than outdoor, air pollution. In particular, poor indoor air quality can be harmful to the most vulnerable patient groups, including children, the elderly, or those suffering from chronic respiratory and/or cardiovascular diseases. Healthcare workers have also been identified as a group at risk of developing work-related asthma.



Good Indoor Air Quality:

VOCs (Volatile Organic Compound) are volatile substances used in materials that can be emitted to indoor air. They can have multiple origins; floor or wall coverings, paint, cleaning products, air fresheners, furniture and considerably degrade the quality of indoor air.

Our Commitment:

- Tarkett’s products have VOC emissions 10 to 100 below the levels required by European standards (<1000µg/m³ at 28 days)
- Our surface treatments allow low maintenance (without any stripping and polishing needed) that avoid occupants’ exposure to harmful chemicals.

Indoor air can be up to five times more polluted than outdoor air.⁸



100%
phthalate-free

Healthy Materials:

Phthalates are mainly used as plasticisers (substances added to plastics to increase their flexibility, transparency, durability and longevity). Nevertheless, phthalates have been the subject of scientific debate about their potential impact on human health.

Our Commitment:

- Since 2010, Tarkett has proactively developed alternatives to phthalates, investing considerably in R&D
- Today, all Tarkett vinyl products manufactured in EMEA are close to 100% phthalate-free.

USING RIGHT MATERIALS FOR GOOD INDOOR AIR QUALITY

TARKETT RANGES	IQ/PREMIUM/MULTISAFE (HOMOGENEOUS VINYL)	EXCELLENCE 80 (HETEROGENEOUS VINYL)	ID INSPIRATION 55/70, ID INSPIRATION CLICK (LVT)	ID CLICK ULTIMATE (LVT)	SAFETRED (SAFETY)
TVOC level (including formaldehyde) after 28 days (µg/m³)	<10 *	<10	<10	<100	<100
Phthalate-free **	✓	✓	✓	✓	✓
REACH compliancy (Registration, Evaluation, Authorization and restriction of Chemicals)	✓	✓	✓	✓	✓

* iQ One ≤ 100
** 100% phthalate free on virgin materials



DESIGNING A SUSTAINABLE BUILDING

Adopting a life cycle approach for the construction of a building is key to reducing environmental impacts while contributing to the wellbeing of the occupants. At Tarkett, we strive to support both our professional clients and consumers in creating healthy, beautiful and sustainable living spaces. Working with industry partners, we’re bringing our best thinking and efforts toward making a positive impact on people and the planet.

Designing for Life:

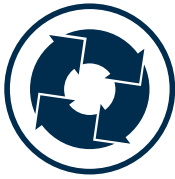
In a healthcare environment, it is important to create spaces to promote patient wellbeing and staff productivity, and create a welcoming environment for patients and visitors. We help you to create healthier, safer, more people-friendly indoor spaces by designing high quality, sustainable products. In particular, by continuously improving the health and environment credentials of our products, we strive to select materials that can be recovered, recycled and transformed into new products. For instance, we have decided to stop the use of biocides in our products. This decision has been endorsed by Tarkett - To avoid contributing to bacteria resistance - To prevent any harmful impact on people health & environment.

Closing the Loop:

With our ReStart takeback program, we help you to manage your flooring waste effectively while contributing to safeguarding the world’s natural resources and protecting the environment. We recycle your flooring offcuts and waste from our production, transforming it into new, high quality products. In this way, we can collectively close the loop and shift to a circular economy.

Driving Collaboration:

The world’s great sustainability challenges require co-operation and partnership across industries and supply chains. We encourage our customers and all our stakeholders to join us in working toward positive change. Importantly, we communicate our sustainability progress transparently, and provide you with clear information about our products and ambitions.



A GOOD CHOICE OF FLOORING CAN HELP REACH THE HIGHEST LEVELS OF SUSTAINABLE REQUIREMENTS

Green building labels (such as BREEAM, DGNB, HQE, LEED, WELL...) set guidelines and standards for sustainable buildings regarding indoor air quality, water and energy consumption, and waste management. Find below an example of how flooring can help you address up to 8 issues and achieve 15 credits for the BREEAM label.

ISSUE	BREEAM CREDITS	IQ/PREMIUM/MULTISAFE (HOMOGENEOUS VINYL)	EXCELLENCE 80 (HETEROGENEOUS VINYL)	ID INSPIRATION 55/70 (LVT)	SAFETRED (SAFETY)
Health and Well-Being Hea02 – Indoor Air Quality	1	✓	✓	✓	✓
Health and Well-Being Hea05 – Acoustic performance	MAX 4	✓	✓	✓	✓
Materials Mat02 – Life-Cycle Impacts	1	✓	✓	✓	✓
Materials Mat03 – Responsible Sourcing of Construction Costs	MAX 3	✓	✓	✓	✓
Materials Mat05 – Designing for Durability and Resilience	1	✓	✓	✓	✓
Materials Mat06 – Material Efficiency	1	✓	✓	✓	✓
Waste Wst01 – Construction Waste Management	3	✓	✓	✓	✓
Waste Wst06 – Functional Adaptability	1	✓	✓	✓	✓

Let us know which green label certification you want to get and what you wish to achieve, our teams will be able to advise you on the best flooring solutions.



RECEPTION & COMMON AREAS

Entrances and common areas play an important role in providing patients and visitors with a positive impression, helping to reduce stress. These areas should inspire confidence, present a welcoming appearance, and facilitate accessibility and orientation.

Use Floorcraft Design Service for Integrating Art Into Hospital:

Colourful motifs and themes can be a helpful and reassuring distraction, particularly in children’s wards. Our Floorcraft Design & Sonic Cutting Service offers scope for stunning effects and eye-catching concepts. From basic lettering to more complex designs, your ideas can be transformed into a unique feature for inclusion in the floor. Our experienced team is ready to apply their Floorcraft skills to your project, building on your ideas and helping to bring them to life.

Low rolling resistance

Heavy traffic resistance

Visual comfort

Easy cleaning

Tarkett’s Best Recommendation:

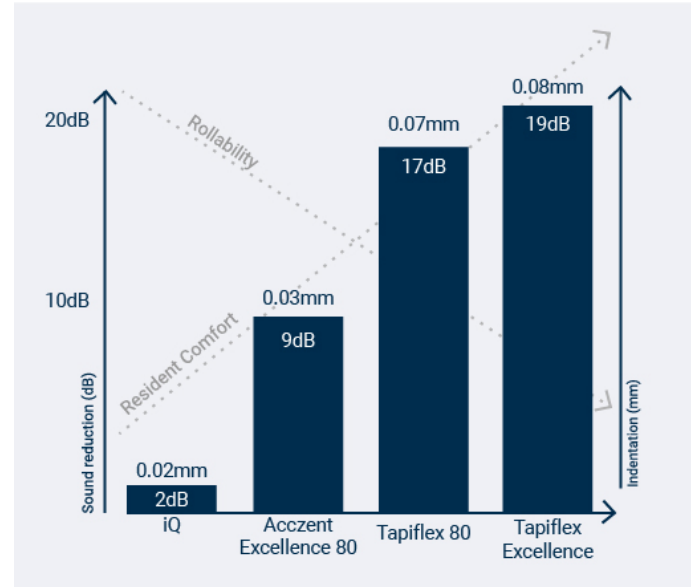
Your need: Creating Your Own Identity

- iD Inspiration 70** - *Luxury Vinyl Tile*
- Infinite combination of formats (planks and tiles), design and bevelling
 - Large choice of material effects (wood, carpet, stone)
 - High traffic resistance
 - Easy maintenance

Other suitable ranges: iQ, Excellence 80.

Your need: Stylish and Rapid Renovation

- iD Click Ultimate** - *Luxury Vinyl Tile*
- High traffic resistance
 - Minimise downtime and use immediately
 - Wood and stone designs
 - High acoustic performance 19dB.



Finding the Right Balance Between Rollability and Acoustic Performance for the Comfort of Both Patients and Staff:

Acoustic floors can impact rolling resistance, presenting a challenge for staff in pushing medical beds. Conversely, lower indentation provides better rollability, but less sound absorption. When selecting flooring choices, it is important to consider how best to achieve the right balance between indentation, sound-proofing and comfort for both patients and staff.

CORRIDORS & CIRCULATION AREAS

Corridors in health care facilities serve two purposes: travelling from one location to another and as a means of helping people find their way. Designing corridors effectively helps to boost patients' confidence, so they can move easily from place to place. Light, designs and colour contrast are central to enhancing people's visual perception, and helping them to orient themselves more quickly. Staff comfort should also be considered, particularly when moving heavy loads.



Tarkett's Best Recommendation:

Your need: Long Lasting Flooring

iQ Range - Homogeneous vinyl

- Large choice of subtle patterns
- High rollability due to a 0.02mm indentation
- High traffic resistance
- High durability with surface properties restoration
- Cost effective maintenance

Other suitable ranges: Acoustic Homogeneous, Excellence 80

Your need: Wall Protection

ProtectWall 1.5 - Homogeneous vinyl

- Robust resistance to shocks and impacts
- Can be welded with the floor for a 'clean concept'
- Decorative design
- Numerous possibilities of harmonious combinations
- Easy to clean



OPERATING THEATRE & CONTROLLED ENVIRONMENTS

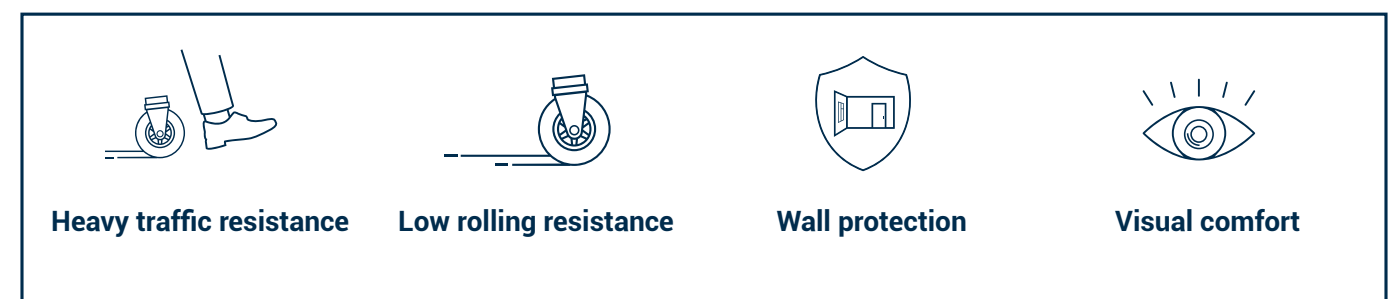
The operating theatre is a fundamental area within today's hospitals, playing a central role in creating and maintaining the hospital's reputation for technical excellence and efficient service, and contributing significantly to revenues. It is critical that operating theatres and other controlled environments should be optimised for patient safety.

Use Third Party-Certified Products for Clean Rooms and Follow a Strict Installation Method:

Cleanliness and hygiene are critical to hospital environments. We offer products certified as suitable for clean rooms by the internationally recognised Fraunhofer Institute, Europe's largest organisation for applied research.

In clean rooms, it is important to know how well flooring and wall coverings can resist chemicals (ISO 26987) and bacteria (ISO 846). Surface cleanliness (ISO 14644-9) also matters, as does the ease of radioactive decontamination in specific areas such as radiology, nuclear medicine, radiotherapy (ISO 8690).

Tarkett flooring and wall coverings provide superior performance and are particularly effective in the demanding clean room environment, discouraging bacterial development, simplifying cleaning and providing excellent stain- and chemical resistance. Coving and well sealed joints eliminate traps for dirt or dust while offering a watertight finish and enhanced seam strength.



Tarkett's Best Recommendation:

Your need: To meet the Highest Standards of Cleanliness

iQ Products - Homogeneous vinyl

- Perfectly smooth, impervious, flexible handling for optimal coving and watertight finish
- Exceptional welded joint resistance >800 N / 50mm
- High resistance to stain and chemicals
- Very low particle emissions, class ISO 4- complies with ASTM F51/F24
- Conductive option: iQ Toro SC (ER ≤ 10⁶ Ω)
- Dissipative option: iQ Granit SD (ED: 10⁸ Ω)

Your need: Wall Protection

ProtectWall 2CR - Heterogeneous vinyl

- High resistance to impacts and scratches: heavy duty EN259
- Smooth, impervious, easy to cove and weld with flooring
- PUR surface treatment for easy cleaning and maintenance
- Very low particle emissions, class ISO 1



Focus: Reducing the Source of Pollutants to Create a People-Friendly Living Space:

At Tarkett, we strive to support both our professional clients and consumers in creating healthy, people-friendly and sustainable living spaces.



100%
phthalate-free

Healthy spaces thanks to 100% phthalate-free product

We have been proactive in seeking alternatives to phthalates as they have been the subject of scientific debate about their potential impact on human health. Since 2010, we have developed the use of a phthalate-free plasticiser technology for our vinyl floors which is approved for food containers and toys intended to be placed in the mouth by children.



Good Indoor Air Quality

Through low levels of total volatile organic compounds (TVOCs) - TVOCs ≤ 10 µg/m³, much lower than EU standard EN ISO 16000.

PATIENT ROOMS

Patients typically spend most of their hospital stay in their room, so it is important to help them feel positive and at home in their private space. Visual and acoustic comfort is essential when designing the room, and indoor air quality is also a vital consideration. Limiting sources of pollution such as volatile organic compounds (VOCs) and optimising ventilation contribute to promoting good indoor air quality.



Acoustic comfort



Visual comfort



Easy cleaning



Indoor air quality

Tarkett's Best Recommendation:

Your need: Combining Hygiene and Homely Design

Tapiflex Excellence 80 - *Heterogeneous Acoustic vinyl*

- Large choice of wood designs and warm colours to create a homely feeling
- 100% matt finish to avoid glare
- Easy maintenance thanks to TopClean XP PUR surface treatment
- Contributes to good Indoor Air Quality (TVOC<10µg/m³)

Your need: Durable, Ease of Maintenance

iQ Range - *Homogeneous vinyl*

- Large choice of subtle patterns
- High rollability due to a 0.02mm indentation
- High traffic resistance
- High durability with surface properties restoration
- Cost effective maintenance



BAREFOOT SLIP RESISTANCE (DIN 51097)

Class A (OCCASIONAL WATER PROTECTION) ANGLE > 12°	CLASS B (SHOWER ROOM, CHANGING ROOM) ANGLE > 18°	CLASS C (CONSTANTLY UNDER WATER) ANGLE > 24°
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Granit Multisafe X

Granite Safe.T X

Primo Safe.T X

Focus: Minimise Risks with Colour Contrasts and Slip Resistance:

Contrast:

- Do not exceed a 10 degree LRV differential for the floorings between the bedroom and the bathroom to allow a continuous moving.
- Choose colours with a difference of 30 degrees between floors and walls LRV, and walls and Sanitary equipments

Slip Resistance:

- Wetroom flooring solutions provide confident grip for bare feet and reduce the risk of slipping, even when covered in soap and water.

SHOWER & WET AREAS

In showers and wet areas, it is important to choose floorings with high slip resistance, in order to help prevent slips and falls. In private showers, particular attention should be paid to visual comfort and creating contrasts that promote patients' independence. Our complete wetroom solution, including walls, floors and accessories, provides easy access, safety and comfort, helping to reassure patients with reduced mobility that they can wash safely and without difficulty.



Slip resistance



Visual comfort



Easy cleaning

Tarkett's Best Recommendation:

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- Perfectly smooth, impervious, flexible handling for optimal coving and watertight finish
- Exceptional welded joint resistance >800 N / 50mm
- High resistance to stain and chemicals
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- Conductive option: iQ Toro SC (ER ≤ 10⁶ Ω)
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		Homogeneous compact	Homogeneous compact	Heterogeneous compact	Heterogeneous Acoustic		Luxury Vinyl Tiles		Homogeneous	Heterogeneous	Homogeneous	Heterogeneous	Heterogeneous			
		IQ RANGES	PREMIUM RANGES	STATIC CONTROL		ACCZENT RANGES	TAPIFLEX	GLUE DOWN LVT	CLICK	SAFETY SOLUTIONS			WETROOM CONCEPT		WALL PROTECTION	
		iQ Granit / Opti-ma / Natural / Surface / Megalit / Eminent	Primo Premium/ Eclipse Premium	iQ Toro SC	iQ Granit SD	Acczent Excellence 80	Tapiflex Excellence 80	iD Inspiration 70	iD Click Ultimate	Granit Safe.T	Primo Safe.T	Safetred Design/ Ion/ Unviersal/ Spectrum	Granit Multisafe	Aquarelle Wall HFS	ProtectWALL 1.5	ProtectWALL 2CR
		CORRIDORS	CORRIDORS, STORAGE AREAS	BEDROOMS	BEDROOMS	BEDROOMS		COMMON AREAS	COMMON AREAS	ALL USES	ALL USES	ALL USES	WETROOMS	WETROOMS	CORRIDORS	CORRIDORS
Durability and resistance	Commercial class EN ISO 10874	34	34	34	34	34	34	34	34	34	34	34	31	-	-	-
	Total thickness EN ISO 24346	2mm	2mm	2mm	2mm	2mm	3.25mm	2.5mm	6.5mm	2mm	2mm	2mm	2mm	0.92mm	1.5mm	2mm
	Wear layer thickness EN ISO 24340 (EN 429)	2mm	2mm	2mm	2mm	0.8mm	0.8mm	0.7mm	0.7mm	2mm	2mm	-	2mm	0.12mm	0.35mm	0.55mm
	Average indentation EN ISO 24343-1	0.02mm	0.03mm	£0.10mm	£0.10mm	0.03mm	0.10mm	0.05mm	0.05mm	0.02mm	0.03mm	<0.10mm	≤0.10mm	-	-	-
	Resistance to impacts EN 259-1 (walls)	-	-	-	-	-	-	-	-	-	-	-	-	-	No visible burst or crack	No visible burst or crack
	Scratch resistance / underfloor heating EN ISO 10456	-	-	-	-	-	-	-	-	-	-	-	-	-	Sclerometre test: Excellent No visible scratch with naked eye	Sclerometre test: Excellent No visible scratch with naked eye
	Thermal resistance/ underfloor heating EN ISO 10456	Approx. 0.01m²K/W Suitable- Max 27°C	Approx. 0.01m²K/W Suitable- Max 27°C	Approx. 0.01m²K/W Suitable- Max 27°C	Approx. 0.01m²K/W Suitable- Max 27°C	0.02m²K/W Suitable	0.04m²K/W Suitable	0.02m²K/W Suitable	0.05m²K/W Suitable	0.01m²K/W Suitable Max 27°C	0.01m²K/W Suitable Max 27°C	0.01m²K/W Suitable Max 27°C	Approx. 0.01m²K/W Suitable- Max 27°C	-	0.02m²K/W	0.02m²K/W
Easy Cleaning	Surface treatment	iQ™	PUR Reinforced	iQ PUR	iQ PUR	TopClean XP™	TopClean XP™	TopClean XP™	PUR Ultimate	Safety Clean™	Safety Clean™	Safety Clean™	-	-	TopClean XP™	TopClean XP™
	Surface treatment performance	***	**	***	***	***	***	***	***	**	**	**	-	-	***	***
Acoustic Comfort	Impact sound reduction EN ISO 717/2	-	-	-	-	3dB	19dB	2dB	19dB	-	-	6dB (Spectrum) 4dB (Ion, Design, Universal)	-	-	-	-
	Acoustic Improvement NF S31-074	-	-	-	-	Class C	Class A	Class C	Class C	-	-	Class C	-	-	-	-
Slip Resistance	DIN51130	-	-	-	-	-	-	-	-	Esf/Esb		Esf	Esf/Esb	-	-	-
	DIN51097	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV	<2kV
	EN 13845 Annexe C	Excellent	Good resistance	Excellent	Excellent	High resistance	High resistance	High resistance	High resistance	Good resistance	Good resistance	Good resistance	Good resistance	Good resistance	Excellent	Excellent
Indoor Air Quality & Environment	Total VOC emissions ISO 16000-9	<10µg/m³	<10µg/m³	<10µg/m³	<10µg/m³	<10µg/m³	<10µg/m³	<10µg/m³	<10µg/m³	<10µg/m³	<10µg/m³	<100µg/m³	<10µg/m³	<10µg/m³	<10µg/m³	<10µg/m³
	Phthalate-free technology	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	% Recyclable	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	% Recyclable content	26%	26%	-	-	33%	21%	32%	-	-	25.5%	-	-	-	11%	11%
Reaction to fire	EN 13501-1	Class B _{fl} s1	Class B _{fl} s2	Class B _{fl} s1	Class B _{fl} s1	B _{fl} -s1 glued over any A2 _{fl} or A1 _{fl} substrate (concrete) C _{fl} -s1 glued over any derivate wood substrate	B _{fl} -s1 glued over any A2 _{fl} or A1 _{fl} substrate (concrete) C _{fl} -s1 glued over any derivate wood substrate	B _{fl} -s1 glued on wood panel and concrete	B _{fl} s2	B _{fl} s1	B _{fl} s1	B _{fl} s1 on cement	B _{fl} s1	B-s2, d0 on gypsum plasterboard and on A1 or and A2 substrate	B-2, d0 glued on any non-metal A1 or A2 s-1, d0 class substrate	B-s3, d0 glued on any non-metal A1 or A2 s-1, d0 class substrate
	EN ISO 9239-1	≥ 8 kW/m2	≥ 8 kW/m2	≥ 8 kW/m2	≥ 8 kW/m2	-	-	-	-	≥ 8 kW/m2	≥ 8 kW/m2	-	≥ 8 kW/m2	-	-	-
	EN ISO 11925-2	Pass	Pass	Pass	Pass	-	-	-	-	Pass	Pass	-	Pass	-	-	-

REFERENCES

¹ OECD

² Health at a glance 2017

³ The Center for Quality Improvements and Patient Safety of Johns Hopkins Hospital

⁴ Federal Statistical Office, Older people in Germany and the EU, 2016

⁵ National Audit Office- "Dischargeing older patients from hospital."

⁶ Healthcare Associated Infection - Action Guide 1.2