

## 5 Surfaces and Finishes

### 5.1 Surfaces

Regular routine cleaning of the Health Care Facilities premises can be carried out much more efficiently if the design of the building has fully addressed surface finishes appropriate to the functional use. Unnecessary horizontal, textured, moisture retaining surfaces or inaccessible areas where moisture or dust can accumulate should, where possible, be avoided.

All fixtures and fittings should accordingly be designed to allow easy cleaning and discourage the accumulation of dust. Integral blinds (double glazed windows with blinds in-between) are preferable to curtains for this reason. Vertical blinds and vinyl roller blinds are also recommended over curtains.

All door surfaces, in particular, the top horizontal surface of doors should be sealed to provide a cleanable, moisture-resistant finish.

Where there is likely to be direct contact with patients, blood or other body fluids, floors and walls should be surfaced with smooth impermeable seamless materials, such as vinyl. In equipment processing areas, work surfaces should be non-porous, smooth and easily cleaned.

All surfaces in high risk clinical areas, including the Operating Unit, Intensive Care Unit, Obstetrics Unit and Neonatal Special Care Nurseries, should be smooth, seamless, inorganic and impervious with sealed or welded joints.

Tiles with grouted joints may be used in the following areas:

- Public areas and waiting areas
- Patient ensembles/ bathrooms
- Consult rooms
- Corridors but not within Operating Unit, Emergency Unit, Intensive Care Unit, High Dependency Unit, Neonatal Intensive Care Unit and Sterile Supply Unit
- Kitchen
- Back-of-House areas
- Non-clinical areas

Where tiles are used, it is recommended that they should be as large as possible to minimise joints but without compromising the gradient of falls in wet areas.

Carpet, flocked vinyl and synthetic parquet flooring can be installed in the following areas when preferred:

- Non-clinical areas
- Waiting areas
- Meeting rooms
- Education and lecture rooms
- Administrative rooms and offices

### 5.2 Ceilings

All exposed ceilings and ceiling structures in areas occupied by patients or staff, and in food preparation or food storage areas, should be finished so as to be readily cleanable with equipment routinely used in daily housekeeping activities.

In food preparation and other areas where dust fallout will present a potential problem, such as clinical areas or storage areas and sterile stock supply rooms, there should be a finished ceiling that covers all conduits, piping, ductwork and open construction systems.

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Ceilings in Operating Rooms, Recovery Stage 1, Birthing Rooms, Isolation Rooms, Nurseries, Sterile Processing Rooms, Bone Marrow Transplant Units and Oncology Units must be monolithic from wall to wall without fissures, open joints, or crevices that may retain or permit passage of dirt particles. Light fittings shall also be recessed and flush fitting, with seals to prevent dust ingress.

Acoustic and/ or lay-in ceilings shall not be used where the disturbance of particulate matter may interfere with infection control.



Figure 22: Acoustic tile ceiling suitable for offices, Conference rooms



Figure 23: Monolithic ceilings in Stage 1 recovery areas

### 5.3 Walls

Other than special treatments such as feature wall elements in public or staff relaxation areas, all wall finishes to clinical areas should all be washable and have a smooth surface. In the immediate vicinity of plumbing fixtures, wall finishes should be smooth and water-resistant, with edges sealed. Tiled areas in food preparation areas should be supplied with epoxy grouting to meet local regulations. Clinical areas that may be tiled should also be supplied with epoxy grouting.

Vinyl-type wall paper may be used instead of standard paint where required. Sheet wall-vinyl, fully welded may be used in lieu of washable paint.

Any 'dwarf' (low height) walls, or walls that are not full height and which provide a ledge for dust collection, particularly when located in clinical or procedural areas, should be capped with a durable and impervious material that can be easily cleaned and maintained. Refer to detail diagram below.

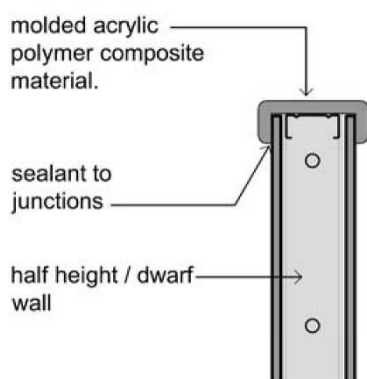


Figure 24: Recommended detail - dwarf wall capping

### 5.4 Doors

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Cavity sliding doors must not be used in clinical areas so that all IPC requirements can be met. Surface sliding doors are permissible as long as they do not contradict local fire safety regulations and there are no floor tracks used.



**Figure 25: Surface sliding doors permitted when meeting local fire regulations**



**Figure 26: Cavity sliding doors not suitable for clinical areas**

Doors to isolation rooms are to be self-closing, fitted with door seals to top and sides of the frame, and include an adjustable drop-down bottom seal. In addition, the astragal or rebated meeting stile of double doors will require a door seal.

Consideration should also be given to the direction of swing of the door, depending on the pressure differential.

Ideally, doors should be swung so that the door action pushes against the seal due to the pressure gradient. Essentially, positive pressure isolation rooms should have an inward swinging door, while negative pressure isolation rooms should have an outward opening door. Where this not possible to achieve, an alternative solution is for both self-closing doors to open into an Anteroom.

### 5.5 Floors and Skirtings

All flooring selections should enable good housekeeping maintenance and be easy to clean. Treatment Areas should not be carpeted. Non-slip vinyl finishes should be located under all handwash basins.

Floors in areas used for food preparation or food assembly should be water resistant and greaseproof to comply with local Food Hygiene Regulations. Floor surfaces in food preparation areas, including joints in tiles, should be resistant to food acids. Local regulations will typically mandate the use of epoxy grouts in tiled food preparation areas. Adoption of epoxy grout to tiled clinical areas is also recommended as an infection prevention and control methodology.

In all areas subject to frequent wet cleaning methods, floor materials should not be physically affected by germicidal cleaning solutions.

Where floors meet wall surfaces in wet areas, the floor finish should be curved at the junction to avoid a square joint, the cove skirting turned up minimum 100mm from the floor. This assists with cleaning maintenance and improves infection control measures. Gaps which can harbour micro-organisms, dirt and grime at the floor/wall junction are therefore avoided.

Skirtings in all clinical areas, food preparation areas and other areas subject to frequent wetting due to cleaning methods, should be made integral with the floor - tightly sealed against the wall and constructed without voids.

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Figure 27: Floors and skirtings in clinical areas such as Operating Unit are integral and covered.

### 5.6 Gaps

A gap is defined as a space where two materials do not meet, leaving a space or opening that can harbour dust, germs, mould or vermin.

In the construction of Health Care Facilities, gaps between surfaces are not permitted, and must therefore be properly sealed. In particular, gaps in the following situations are not allowed:

- Between skirting and floor
- Between utility benches and walls
- Between cupboards and floor or walls
- Between fixtures (including sanitary fixtures) attached to floors and walls.

Floor and wall construction, finishes and trims in dietary and food preparation areas shall be free of spaces that can harbour rodents and insects. Details are to comply with the relevant Local Authority Regulations.

Floor and wall penetrations by pipes, ducts and conduits shall be tightly sealed to prevent entry by rodents and insects. Joints in structural elements shall be similarly sealed.

Gaps in the following situations are not acceptable and must be sealed:



Figure 28: Gaps between door frame and floor



Gap between bench fitting and wall



Gap between skirting and walls

### 5.7 Indoor Plants and Water Features

Indoor natural plants are not recommended in healthcare facilities. Indoor plants may be used only in limited areas of the public lobby, although not recommended by these Guidelines. Indoor natural or artificial plants must not be used in any patient or clinical areas of healthcare facilities.

Water features, other than sealed aquariums, should not be used inside healthcare facilities.