

# Slip Resistance Guidelines for Pedestrian Surfaces

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## Classifications for particular applications

Table 1 provides a guidance for the required slip resistance ratings for various pedestrian surfaces. The values represent a consensus view of Committee BD-094, although not all experts agree on all values.
The values in Table 2 have been determined by the following process:

- Applications and corresponding values were selected initially from HB 197:1999
- A subcommittee of Committee BD-094 modified some applications and values, and these were further modified during the review process.

## Areas of Concern where higher slip-resistance is required

Along with many experts and independent slip-testing companies, Stellmann recommends higher slip-resistance ratings for several areas.

## Hotel Apartment Bathrooms, ensuites and toilets

Stellmann strongly recommends a P3 slip-rating for hotel showers and bathrooms. There are two main reasons why we recommend a P3 slip-rating.

- **Hotel showers and bathrooms** are high-risk areas for slips and falls due to the presence of water and soap. For example, is much more exposure to water and soap compared to toilet facilities in offices, hotels, and shopping centres, where a P3 rating has been specified. It is therefore unreasonable to require a lower slip-rating for a higher risks area.
- **Duty of Care:** Hotels have a duty of care to provide a safe environment for their guests. By implementing a higher slip-resistance requirement, hotels can demonstrate their commitment to guest safety and reduce the potential liability for accidents or injuries that may occur on their premises.



## Bathrooms and ensuites in hospitals and aged care facilities

Stellmann strongly recommend a P4 slip-rating in showers in aged care and hospitals.

- **Increased Risk Factors:** Aged care facilities and hospitals cater to individuals who may have reduced mobility, balance issues, or other impairments. These populations are more prone to falls and injuries, making it crucial to prioritise their safety.
- **Rehabilitation and Recovery:** Many individuals in aged care facilities and hospitals are undergoing rehabilitation or recovering from illnesses, surgeries, or injuries. Slip and fall incidents can have severe consequences, causing setbacks in the recovery process or even leading to further health complications. By ensuring a higher level of slip-resistance in bathrooms, the risk of such incidents can be minimised, facilitating smoother and safer recovery journeys.
- **Staff Safety and Efficiency:** Staff members in aged care facilities and hospitals are responsible for assisting patients or residents in bathrooms, performing cleaning tasks, and maintaining a safe environment. By enforcing a higher slip-resistance standard, staff members can carry out their duties with reduced risk to themselves and others. This contributes to a safer work environment, promotes staff well-being, and improves overall operational efficiency.

**TABLE 1: Minimum wet pendulum test or oil-wet inclining platform classifications that are deemed-to-satisfy the building applications in the NCC**

| Location | Wet Pendulum Test | Oil-wet inclining platform |
|---|---|---|
| **Stair Treads and Stairway Landings in Buildings Covered by NCC Volumes One and Two** | | |
| - Stair treads and a stairway landing (when dry) | P3 | R10 |
| - Stair treads and a stairway landing (when wet) | P4 | R11 |
| **Nosings for Stair Treads and Stairway Landings in Buildings Covered by NCC Volumes One and Two** | | |
| - Dry stair tread, a stair non-skid nosing strip and a stairway landing | P3 | |
| - Wet stair tread, a stair non-skid nosing strip and a stairway landing | P4 | |
| **Ramps in Buildings Covered by NCC Volumes One and Two** | | |
| - Ramps not steeper than 1:14 gradient (when dry) | P3 | R10 |
| - Ramps not steeper than 1:14 gradient (when wet) | P4 | R11 |
| - Ramps steeper than 1:14 up but not steeper than 1:8 (when dry) | P4 | R11 |
| - Ramps steeper than 1:14 up but not steeper than 1:8 (when wet) | P5 | R12 |

**NOTES:**

NCC compliance is demonstrated by achieving the values set out in this Table for either the wet pendulum test or the oil-wet inclining ramp test. It is not necessary to meet both criteria.

**TABLE 2: Wet pendulum test or oil-wet inclining platform classifications for applications where the NCC does not require slip resistance**

| Location | Wet Pendulum Test | Oil-wet inclining platform |
|---|---|---|
| **External Pavements and Ramps** | | |
| - External ramps including sloping driveways, footpaths etc. Steeper than 1 in 14 | P5 | R12 |
| - External ramps including sloping driveways, foot paths etc., under 1:14, external sales areas (eg. Markets), external carpark areas, external colonnades, walkways, pedestrian crossings, balconies, verandas, carports, driveways, courtyards and roof decks. | P4 | R11 |
| - Undercover car parks | P3 | R10 |
| **Hotels, Offices, Public Buildings, Schools and Kindergartens** | | |
| Entries and access areas including hotels, offices, public buildings, schools, kindergartens, common areas of public buildings, internal lift lobbies. | | |
| - Wet Area | P3 | R10 |
| - Transitional Area | P2 | R9 |
| - Dry Area | P1 [3] | R9 |
| - Toilet Facilities in offices, hotels and shopping centres | P3 | R10 |
| - Hotel apartment bathrooms, en suites and toilets | P2 | A |
| - Hotel apartment kitchens and laundries | P2 | R9 |
| **Supermarkets and Shopping Centres** | | |
| - Fast food outlets, buffet food servery areas, food courts and fast food dining areas in shopping centres | P3 | R10 |
| - Shop and supermarket fresh fruit and vegetable areas | P3 | R10 |
| - Shop entry areas with external entrances | P3 | R10 |
| - Supermarket aisles (except fresh fruit areas) | P1 [3] | R9 |
| - Other separate shops inside shopping centres - wet | P3 | R10 |
| - Other separate shops inside shopping centres - dry | P1 [3] | R9 |
| **Loading docks, Commercial Kitchens, Cold Stores, Serving areas** | | |
| - Loading docks undercover and commercial kitchens | P5 | R12 |
| - Serving areas behind bars in public hotels and clubs, cold stores and freezers | P4 | R11 |
| **Swimming pools and Sporting Facilities** | | |
| - Swimming pool ramps and stairs leading to water | P5 | C |
| - Swimming pool surrounds and communal shower rooms | P4 | B |
| - Communal changing rooms | P3 | A |
| - Undercover concourse areas of sports stadiums | P3 | R10 |
| **Hospitals and Aged Care Facilities** | | |
| - Bathrooms and en suites in hospitals and aged care facilities | P3 | B |
| - Wards and corridors in hospital and aged care facilities | P2 | R9 |

**NOTES:**

1. The slip resistances of pedestrian surface materials set out in Table 3B are intended as guidance in the context of design for pedestrian safety, taking account other factors including abnormal wear, maintenance, abnormal contamination, the presence (or otherwise) of water or other lubricants, the nature of the pedestrian traffic (including age, gait and crowding), the footwear (or lack thereof), slope, lighting and handrails.
2. The contents of Table 3B are subject to further review by Committee BD-094, in its on-going project to provide guidance on the specification and testing of slip resistance.
3. The minimum classifications listed in Table 3B are P1 and R9. It is inappropriate for Table 3B to list the lower classification, P0, since there is no lower limit on Classification P0. Notwithstanding, some smooth and polished floor surfaces, which do not achieve Classification P1, may be considered to provide a safe walking environment for normal pedestrians walking at a moderate pace, provided the surfaces are kept clean and dry; however, should these surfaces become contaminated by either wet or dry materials, or be used by pedestrians in any other manner, then they may become unsafe. Therefore, the type of maintenance, the in-service inspection of floors, other environmental conditions and use should be taken in to account when selecting such products.
4. When using the oil-wet inclining platform 'R' classifications, consideration should also be given to the determination and use of volumetric displacement 'V' classifications. In some cases, a specifier may choose either a particular combination of R and V values, or a more severe R value alone. For example, either R10 + V4, or R11.