Standards Information

ON SITE WET AND DRY FLOOR SLIP TESTING SERVICES

Sliptest AUSTRALIA PTY LTD

NATA ACCREDITATION CNO 15374

Over 25 years of experience in Slip Prevention Technology

The following information is provided in order to assist our clients in understanding their test results and how they may be interpreted in relation to the relevant Australian Standards.

There are two Australian Standards for the testing the slip resistance of pedestrian surfaces;

- AS 4586:2013 Slip resistance classification of new pedestrian surface materials.

And

- AS4663:2013 Slip resistance classification of existing pedestrian surface materials.

"A new pedestrian surface is considered to become an existing pedestrian surface once it has been installed and made available for pedestrian traffic, other than the movements specifically for the purposes of formal testing to determine compliance with the Standard." (AS4586:2013, page 4 last paragraph)

Testing of existing pedestrian surfaces is covered in AS 4663. While the test methodology for the pendulum machine is essentially identical in both standards, AS4663 gives the result as a number rather than a "P" rating. This can be confusing to many of our clients. We draw your attention to Table 2 below.

It is also worth noting, that as we are accredited by NATA to test to the standards, the insertion of information other than that contained in the standard is considered an "opinion" and as such is not allowed. This includes information contained in the relevant handbooks as they are not a standard.

We recommend that your test report be read in conjunction with the relevant Australian Standard and Handbook HB 198.

TABLE 2

CLASSIFICATION OF PEDESTRIAN SURFACE MATERIALS ACCORDING TO THE AS 4586 WET PENDULUM TEST

CLASS	Pendulum SRV (see Note 1)	
	Slider 96	Slider 55
P5	>54	>44
P4	45-54	40-44
P3	35-44	35-39
P2	25-34	20-34
P1	12-24	<20
P0	<12	

NOTES:

1. While Slider 96 or Slider 55 rubbers may be used, the test report shall specify the rubber that was used.
2. It is expected that these surfaces will have greater slip resistance when dry.
3. SDV may be calculated by using the tables that are given in Appendix F, and the minimum SRV that is considered appropriate for a level surface (see examples given in Appendix F)

TABLE 3A
HB 198:2014

MINIMUM WET PENDULUM TEST OR OIL-WET INCLINING PLATFORM CLASSIFICATIONS THAT ARE DEEMED TO SATISFY THE BUILDING APPLICATIONS IN THE NATIONAL CONSTRUCTION CODE

Location	Wet pendulum test	Oil-wet inclining platform test
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 but not steeper than 1:8 (when dry)	P4	R11
Ramps steeper than 1:14 but not steeper than 1:8 (when wet)	P5	R12

***NOTE**: 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*

There are some fundamental differences in the purpose and nature of Tables 3A and 3B.

- Table 3A applications and values have been determined by the Australian Building Codes Board for use in regulations based on the NCC. It provides the minimum wet pendulum test or oil-wet inclining platform test classifications that are deemed-to satisfy specific applications in buildings covered by the NCC. These values may be used as acceptance criteria in a range of situations, including those where the building incorporates only the minimum regulated NCC requirements for handrails, lighting and the like
- Table 3B applications and values have been determined by Committee BD-094 for use in applications that are not regulated by the NCC. It provides wet pendulum test or oil-wet inclining platform test classifications for applications where the NCC does not specifically require slip resistance. The applications listed are some of those for which slip resistance is warranted for reasons other than NCC compliance. The use of these values should be in the context of design, which also considers 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.

TABLE 3B
HB 198:2014
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 test
External Pavements and Ramps		
External ramps including sloping driveways, footpaths etc. steeper than 1 in 14	P5	R12
External ramps including sloping driveways, footpaths, etc., under1:14, external sales areas (e.g. 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 (see note 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 with external entrance	P3	R10
Supermarket aisles (except fresh food areas)	P1 (see note 3)	R9
Other separate shops inside shopping centres - wet	P3	R10
Other separate shops inside shopping centres - dry	P1 (see note 3)	R9
Loading Docks, Commercial Kitchens, Cold Stores, Serving Areas		
Loading docks under cover 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 area of sports stadium	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 TO TABLE 3B:

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.

We appreciate that our clients are used to the “P” and “R” classifications as an easy way of determining if a surface meets specification or not, and provided the material is covered or protected prior to testing, this is still the case. The problem we have, as indeed all testing houses have, is that we are bound by the standards and the wording contained therein. Not only can any deviation effect our accreditation, it can have legal consequences as well.

The Australian Standards are living documents in that they are always being reviewed and modified as technology and information improve. Educating our clients and their clients in regard to the contents and requirements of the standards is a large part of our service. I hope you find this information of some assistance, but should you have any questions regarding your tests or the standards themselves, please feel free to contact us at any time.

Kathryn Ording

Slipest Australia Pty Ltd