

For Every Step®



classic
architectural group

Entrance Matting Compliance Guide





We create better
shared spaces.
Everyone deserves
easy access.

Compliance Begins with Classic: Here's Why



Trusted Compliance Experts

We deliver compliant solutions for stairs, floors, bike storage, bollards, and car park safety. Trust us to get it right.



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Partnering with building professionals across Australia, we offer design, supply, and installation services. Your project is in expert hands.



Easy LRV Calculator

Our free online LRV Calculator gives instant luminance contrast values for dry and wet readings, with a Pass or Fail to Australian Standards. Get immediate results emailed to you.



Comprehensive Resource Hub

Our Resource Hub offers downloadable technical documents including Compliance Guides, Product Data Sheets, Fire Reports, Slip Reports, LRV Reports, and Installation Guides—all in one place.



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Visualise your product in your space with Classic's 3D and Augmented Reality technology, ensuring it's perfect before implementation.



Committed to Sustainability

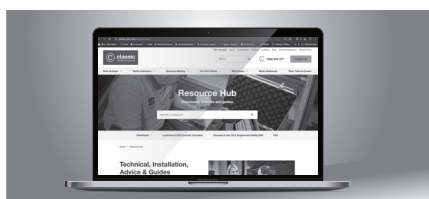
Our Low Impact For the Environment (LIFE®) Program shows our commitment to sustainability from production to end-of-life.



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With local manufacturing and operations across Australia, we ensure fast turnarounds and reliable service.

Trust us to get it right.



Why is compliance important?

In Australia, commercial entrance matting should comply with relevant Australian Standards to ensure safety, durability, and performance. While there is not a specific Australian Standard for entrance matting, several standards and guidelines apply to materials, installation, and performance. Ensuring that entrance matting facilitates rather than impedes access for people with disabilities is crucial. It is essential to install entrance matting in a way that enables smooth and safe passage for wheelchairs, walkers, and other mobility aids, thereby avoiding any barriers to accessibility.

What codes and standards are relevant?

The Disability Discrimination Act (DDA) mandates that buildings and facilities in Australia ensure reasonable access for people with disabilities. This encompasses the safety and accessibility of stairways, walkways, and all communal areas. While the DDA doesn't explicitly outline specific requirements for this, it provides the overarching goal of guaranteeing safe access for people with disabilities.

In Australia, the National Construction Code (NCC) and Building Code of Australia (BCA) incorporate Australian Standards that detail specific requirements for designing accessible environments, including provisions for mobility and access. The NCC is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia. The BCA forms chapters 1 and 2 of the NCC. Under the NCC 2022, all building classifications must be accessible to people with disabilities with reference to the Australian Standard. The standards relevant to entrance matting are outlined below;

AS1428.1:2021 – Design for access and mobility: This standard includes provisions related to access and mobility for people with disabilities. These provisions ensure that buildings are accessible and usable by all individuals, including those with mobility impairments. Entrance matting should not impede access or create barriers for people with disabilities.

AS4586:2013 - Slip resistance classification of new pedestrian surface materials: While the NCC does not specify slip resistance requirements for entrance matting specifically, it does require floor surfaces to have adequate slip resistance to minimise the risk of slips and falls. This standard provides a method for testing and classifying the slip resistance of pedestrian surface materials.

Fire Safety (NCC 2022 Fire Resistance – Class 2 – 9 Properties of Floor Material and Coverings): The NCC contains provisions related to fire safety, including requirements for materials used in building construction. It specifies the fire resistance ratings required

for floor materials and coverings. All matting materials should have the appropriate fire resistance properties, especially if they are installed in high-traffic commercial areas.

Where are these codes and standards applicable?

The NCC is applicable in to;

- All commercial developments
- Any residential apartment developments

Outline of AS1428.1:2021 requirements:

While AS1428.1 primarily focuses on general requirements for access in buildings, certain provisions within the standard can apply to entrance matting, particularly in commercial settings. This includes;

Access Pathways

AS1428.1 outlines requirements for access pathways, including entrances, corridors, and circulation spaces. entrance matting should be installed in a manner that does not obstruct these pathways, ensuring unimpeded access for people with disabilities, including those using mobility aids such as wheelchairs or walkers.

Slip Resistance

Entrance mats should provide adequate slip resistance to minimise the risk of slips and falls, especially in areas prone to wetness or contaminants. While AS1428.1 does not prescribe specific slip resistance requirements for entrance mats, it emphasises the importance of providing slip-resistant surfaces to prevent accidents, especially for people with mobility impairments. It is advisable to follow the slip resistance requirements outlined in AS4586:2013 (see further details on page 8).

Texture

AS1428.1 recommends that floor surfaces should have a consistent and detectable texture to aid people with vision impairments in navigating the environment safely. Where carpets or any soft flexible materials are used on the ground or floor surface;

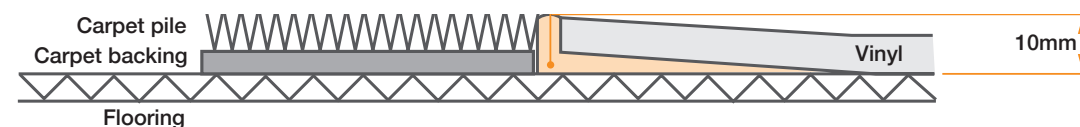
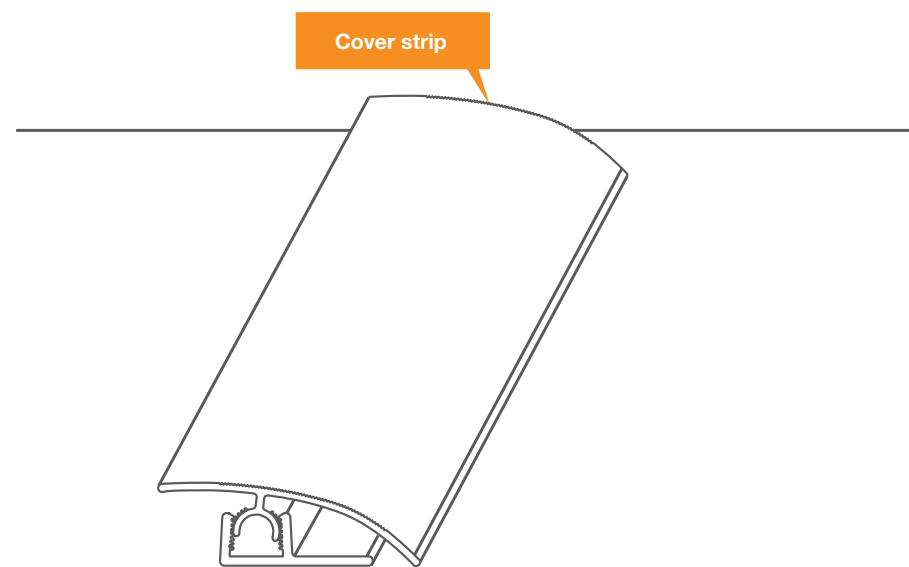
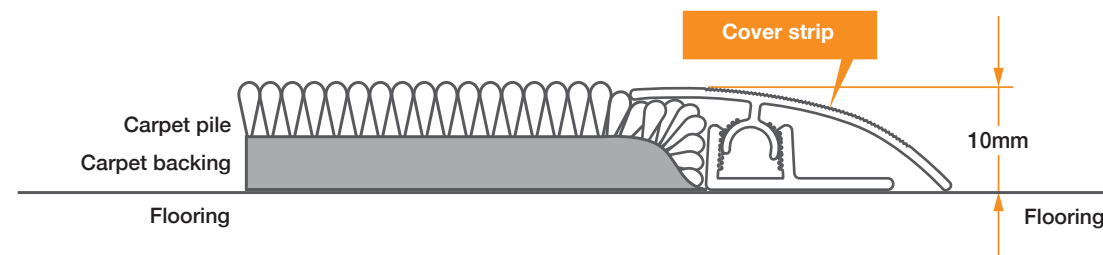
- the pile height or pile thickness shall not exceed 11mm and the carpet thickness shall not exceed 4mm; and

- the combined dimensions of the backing and pile shall be a maximum of 15mm.

Transition

AS1428.1 addresses requirements for changes in floor level, including transitions between different flooring materials. Entrance matting should be installed in a way that ensures smooth transitions and does not create trip hazards. At the leading edge, carpet trims and mat edges should have;

- a vertical face no higher than 3mm; or
- a rounded or bevelled edge no higher than 5mm or above the gradient of 1:4 up to a maximum of 10mm.



Threshold Ramps

A threshold ramp or a ramp trim may be necessary to ensure a smooth transition from a surface mounted entry mat, to the main floor surface. Where used, such ramps must have;

- a maximum rise of 35mm
- a maximum length of 280mm
- a maximum gradient of 1:8

Mat Size

People might make an effort to wipe their feet at home, but very few do this at public buildings, shopping centers, or reception areas, that's why having an entrance mat or 'spill-off area' that's sufficiently long enough to handle all foot traffic is crucial. Research by 3M shows that even as few as 150 people entering a building can bring in nearly half a kilogram of dirt over a five-day work week, potentially costing over \$50,000 annually to clean.

Experts generally suggest that entrance matting should be long enough to allow for two steps per foot (four steps in total), but the exact length and depth required are not specified in building codes. At Classic, we recommend that matting extend at least 1.8 meters beyond the entrance doors on both sides, or a greater distance if traffic naturally flows across the direction. For traffic flow direction, a minimum of 3 meters is advised for low traffic areas, and between 6 to 10 meters for optimal performance in high traffic zones.

Colour and Luminance Contrast

The standard recommends that there should be a clear visual contrast between floor surfaces and surrounding areas, including entrance mats. This contrast helps individuals with low vision to perceive changes in floor level and transitions more easily. While AS1428.1 does not specify specific luminance contrast ratios for entrance mats, it refers to the principles outlined in AS/NZS 1428.4.1. These documents provide detailed guidance on luminance contrast requirements for various building elements, including floors, stairs, and tactile indicators (see Classic's Compliance Guides for Stair Nosings & Tactiles for further information).

Entrance Doors

Entrance mats should not interfere with the operation of entrance doors or impede accessibility for individuals entering or exiting the building.

Glancing Light

Glancing light refers to light that strikes a surface at a shallow angle rather than directly or perpendicularly. This type of light creates distinctive visual effects and can significantly impact how surfaces and materials appear. Glancing light can have a significant impact on many people, including those with disabilities, particularly in terms of visibility, comfort, and accessibility. It is therefore an important consideration when selectiing the colour (or colour combination) of your entrance matting, as high contrast colours such as a natural aluminium mat frame combined with black or dark inserts, are more likely to create this glancing light affect.

Maintenance and Durability

Entrance mats should be maintained in good condition to ensure continued accessibility and safety. Regular inspection and maintenance of entrance mats are essential to address any wear, damage, or deterioration that may affect their performance or compliance with accessibility requirements.

Outline of AS4586:2013 requirements:

As mentioned previously, whilst there are no specific slip resistance requirements for entrance ats, it is advisable to follow the slip resistance requirements outlined in standard AS4586:2013, in order to ensure adequate slip resistance, minimising the risk of slips and falls.

Slip Resistance Classifications

- AS4586:2013 classifies pedestrian surfaces into five categories based on their slip resistance properties: P1, P2, P3, P4, and P5
 - P1: Low Slip Potential: Surfaces classified as P1 exhibit a low slip potential under typical pedestrian conditions.
 - P2: Moderate Slip Potential: P2 classification indicates moderate slip potential for pedestrian surfaces.

- P3: High Slip Potential: Surfaces classified as P3 have a high slip potential and may pose a significant risk of slips and falls, particularly in wet or contaminated conditions.
- P4: Very High Slip Potential: P4 classification indicates a very high slip potential for pedestrian surfaces.
- P5: Extremely High Slip Potential: P5 classification represents an extremely high slip potential, indicating surfaces that are highly hazardous and pose an imminent risk of slips and falls.

Pendulum Classification	Slip Resistance Value (SRV)	Slip Risk
P0	Below 12	Very high
P1	12-24	Very high
P2	25-34	High
P3	35-44	Moderate
P4	45-54	Low
P5	Over 54	Very Low

- These values indicate the level of slip resistance required to minimise the risk of slips and falls under typical pedestrian conditions.
- Certification and documentation of slip resistance test results may be required to demonstrate compliance with the standard.

Slip Resistance Testing

Slip resistance values are determined through pendulum testing, which measures the dynamic coefficient of friction (DCOF) of pedestrian surfaces under specified conditions. The Pendulum Test Value (PTV) indicates the level of slip resistance exhibited by a surface, with higher values indicating greater slip resistance.

Slip Rating Requirements

As previously mentioned, AS 4586:2013 does not have a specific slip requirement for entrance mats, however the standard typically requires a minimum slip resistance rating of P3 for any pedestrian surface area. This rating indicates a moderate level of slip resistance suitable for most general-purpose areas. However, in certain environments where there may be higher levels of traffic or a high possibility of moisture, a higher slip resistance rating may be necessary.

Maintenance

Proper cleaning, maintenance, and periodic testing are recommended to uphold the slip resistance of pedestrian surfaces.

Outline of NCC 2022 - Fire safety requirements:

Testing

The Building Code of Australia (BCA) assigns fire resistance ratings (FRR) to building materials based on their ability to withstand exposure to fire without failure. These ratings indicate the duration for which a material or assembly can maintain structural adequacy, integrity, and insulation during a fire. Building materials (including stair nosings) must undergo fire resistance testing in accordance with recognised testing standards referenced in the BCA.

Requirements

Fire resistance levels (FRL) are assigned to building elements, such as walls, floors, roofs, doors, and windows, based on their fire resistance ratings for structural adequacy, integrity, and insulation. The BCA specifies minimum FRL requirements for different building types and occupancies, these are measured using results from the Critical Radiant Flux (CRF) test. This test measures the radiant energy required to sustain burning as determined by AS ISO 9239.1. The CRF is basically the lowest energy a fire requires to keep burning, hence the higher the value the better.

The NCC states (in S7C3) that a floor lining or floor covering must have:

- A Critical Radiant Flux (CRF) not less than that listed in the Table S7C3 below; and
- in a building not protected by a sprinkler system (other than a FPAA101D or FPAA101H

system) complying with Specification 17, a maximum smoke development rate of 750 percent-minutes; and

- a group number complying with S7C6(b) for any portion of the floor covering that is continued more than 150mm up a wall.

Table S7C3 CRITICAL RADIANT FLUX (CRF in kW/m 2) OF FLOOR MATERIALS AND FLOOR COVERINGS Class of Building	Building not fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17	Building fitted with a sprinkler system (other than a FPAA101D or FPAA101H system) complying with Specification 17	Fire-isolated exits and fire control rooms
Class 2, 3, 5, 6, 7, 8 or 9b, excluding: (i) Class 3 accommodation for the aged; and (ii) Class 9b as specified below.	2.2	1.2	2.2
Class 3 Accommodation for the aged.	4.5	2.2	4.5
Class 9a Patient care areas. Areas other than patient care areas.	4.5 2.2	2.2 1.2	4.5 4.5
Class 9b auditorium or audience seating area used mainly for— (i) indoor swimming or ice skating; and (ii) other sports or multi-purpose functions.	1.2 2.2	1.2 1.2	2.2 2.2
Class 9c Resident use areas. Areas other than resident use areas.	-- --	2.2 1.2	4.5 4.5

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