



Slip Resistance

On 1 May 2014, the Building Code of Australia (BCA) adopted minimum slip resistance classifications for stairs (treads or nosings to treads) and for certain buildings the surfaces of ramps and landings.

This classification is for:

- Residential Housing (Class 1 and Class 10 buildings)
- Multi-Residential, Commercial and Public Buildings (Class 2 – 9 buildings).

These new requirements are derived from Australian Standard *AS 4586:2013 – Slip resistance classification of new pedestrian surface materials*.

Australian Standard AS 4586 - 2013 – Slip resistance classification of new pedestrian surface materials

The following chart shows the classification of pedestrian surface materials according to AS 4586 - 2013. The rating scale works on the basis of the higher the rating, the better the slip resistance.

Classifications	Slip Resistance Value (SRV)	
	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	

* Slider 96 (a rubber block fitted to the end of the pendulum) is used for testing internal surfaces.

** Slider 55 is used for testing outdoor surfaces and wet barefoot surfaces.

AS 4586:2013 states that when the Wet Pendulum Test is used for the measurement of the frictional characteristics of new carpet or 'carpet-like' surface materials:

- the presence of any underlay and the condition of the surface must be reported; and
- the test method must be varied for products intended for use in only dry conditions.

This requires the surface to be tested dry (not saturated with potable water).

BCA Compliance

From 1 May 2014, subject to State and Territory transitional provisions, to comply with the BCA 'deemed-to-satisfy' slip resistance requirements, a Building Permit holder must submit a slip resistance test report to the appropriate building regulatory authority e.g. a building surveyor or local council.



Slip Resistance Testing

The Carpet Institute of Australia has AS 4586 test results for 156 tufted, woven and flocked carpet constructions (with and without underlay) of different styles and fibre types, ranging from 410 to 2,576 grams per square metre Total Pile Mass and 0.8 to 15.2 mm Pile Thickness.

All carpets tested achieved the P4 and P5 ratings. For dry surfaces, the majority of carpet installations, (other than ramps steeper than 1:14) only a classification of P3 is required.

Test reports based on the 2004 edition of AS/NZS 4586 and issued prior to 1 May 2014 remain valid for the purposes of achieving compliance with BCA 2014. For purposes of assessing compliance, the slip-resistance classifications of V, W and X in reports based on the 2004 edition may be considered to be equivalent to slip-resistance classifications P5, P4 and P3 respectively in the 2013 edition of AS 4586.

CSIRO Study of Slip Resistance Test Results

A recent CSIRO study, commissioned by the Carpet Institute, found that carpets of the types shown in the Table below, will achieve a slip resistance classification not less than P3 with 99.9% confidence (i.e. only 1 chance in 1,000 of a non-complying test report).

Fibre Type	Cut Pile carpet	Loop Pile Carpet
Wool and wool rich	OK for $4.1\text{mm} \leq \text{PT} \leq 15.2\text{mm}$	
Nylon	OK for $3.8\text{mm} \leq \text{PT} \leq 8\text{mm}$	OK for $3.5\text{mm} \leq \text{PT} \leq 6.6\text{mm}$
Other	OK for $3.8\text{mm} \leq \text{PT} \leq 8\text{mm}$	Insufficient data

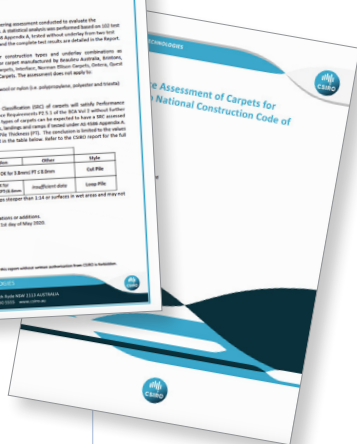
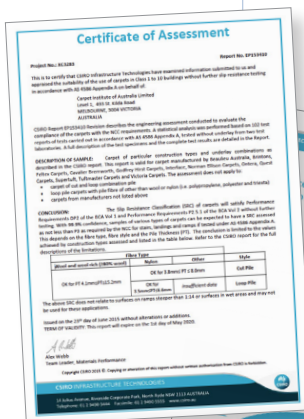
Notes:

- PT is measured pile thickness
- Wool and wool rich carpet has not less than 80% wool pile content
- Nylon carpet has 100% nylon pile content
- Other carpet has 100% pile content that is polyester, polypropylene or triexta
- Carpet must be 100% cut pile or 100% loop pile

The Study produced a detailed Report and Certificate of Assessment, which may be submitted to a building regulatory authority as part of an 'Alternative Solution' to demonstrate Code compliance.

Further Information

Copies of the CSIRO Report and Certificate of Assessment may be obtained by contacting the Carpet Institute on 03 9804 5559, email info@carpetoz.com.au or visit our website www.carpetinstitute.com.au



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About the Carpet Institute of Australia

The Carpet Institute of Australia Limited (CIAL) is the lead industry association for Australia's \$1.6 billion carpet industry. CIAL represents carpet manufacturers, carpet retailers and other suppliers of goods and services to the industry.

Carpet Institute of Australia Limited ABN 11 006 829 303

PO Box 7172, St Kilda Road, Melbourne 3004 Tel: (03) 9804 5559 • Fax: (03) 9804 5560

Email: info@carpetoz.com.au • Web: www.carpetinstitute.com.au