

A&I Coatings FAQ Sheet No. 8

Slip Resistant Coatings

1. What are the requirements for slip-resistant coatings?

Australian Standard 4586-2013 '*Slip-resistance classification of new pedestrian surface materials*' applies to all classes of buildings under the Building Code of Australia

Slip-resistance classifications are required for

- Floor surfaces of a ramp
- The surface of a tread or the nosing strip on the tread
- The surface of a landing or the strip at the edge of the landing.

The application of finishes to these areas must have documentary evidence to prove the classification. This applies to all finishes and surface types, including carpet, tiles, timber, vinyl, concrete and metal.

SA HB 198 An Introductory Guide to the Specification and Testing of slip Resistance of Pedestrian Surfaces is a Handbook published by Standards Australia to provide guidance and help in understanding the Standard. It points up the need of risk assessment and management, and takes into account the pedestrian contribution to risk of slipping and also the likelihood of contamination and other factors. It also notes that aging and wear of the surface will alter its slip resistive quality.

However, there are also individual council requirements and requirements under common laws that loss or damage to others has not been caused by negligence.

A& I Coatings recommends that the facility owner and applicator get signoff by a registered certifier on a sample area before project commencement.

2. Who should certify a non-slip coating?

Documentary evidence must be from an organisation registered by the National Association of Testing Authorities (NATA), or a product certification body

accredited by the Joint Accreditation Scheme of Australia and New Zealand (JAS-ANZ)

3. What is the background to the requirement for Slip Resistance of Pedestrian Surfaces?

Falls are the most frequent cause of accidental injury, and slipping on pedestrian surfaces is a significant factor on this. The consequences can be very serious, especially when elderly or disabled are involved. Too much attention is often given to appearance and style rather than safety when selecting flooring. Our mission is to recommend a flooring system that combines appearance with safety.

4. Is it possible to completely eliminate the risk of accident?

No, because several factors contribute other than the floor surface, especially footwear, contamination, lighting conditions, health and agility, speed and gait of walking.

5. What are the disadvantages of Slip Resistance Additives?

They make the surface harder to clean by definition, and it requires a different type of cleaning method. It is therefore a compromise between slip resistance and ease of cleaning, but within the confines of the law.

6. How is slip resistance measured?

a. **Wet Pendulum Test.** This is a portable machine meaning that it can be used on site.

Classifications of the **Contribution of the floor surface to the risk of slipping when wet** ranges for Slider 96 rubber from...

P5 >54 to...

P4 45-54

P3 35-44

P2 25-34

P1 12-24

P0 <12

b. **Tortus Dry Floor Friction Test.** This is a portable machine.

- D1 Mean Value \geq approx.0.4 Moderate to low risk of slipping when dry
- D0 Mean Value $<$ approx.0.4 High to very high risk of slipping when dry

c. **Wet Barefoot Ramp Test.** This is an offsite test comprising a person on a ramp subjected to a stream of water whose angle is adjusted up until it is no longer safe to walk.

Mean angle of inclination	Quality Group
$<12^\circ$	No Classification
$\geq 12^\circ$	A
$\geq 18^\circ$	B
$\geq 24^\circ$	C

d. **Oil Wet Ramp Test.** This is an offsite test comprising a person on a ramp which has been coated with engine lubricating oil whose angle is adjusted up until it is no longer safe to walk.

Corrected mean overall acceptance angle	Slip resistance assessment group
$<6^\circ$	No Classification
$>6^\circ-10^\circ$	R9
Over $10^\circ-19^\circ$	R10
Over $19^\circ-27^\circ$	R11
Over $27^\circ-35^\circ$	R12
Over 35°	R13

7. How do I know what system to go for?

Normally the Specifier will have access to the Australian Standard or Building Code.

Some typical examples are...

Location	Pendulum Ramp	
External ramps	P5	R11

Shopping Centre Food Court	P3	R10
Supermarket aisles	P2	R9
Swimming pool ramps and stairs leading into water	P5	C
Communal changing rooms	P3	A

Broadly speaking, to achieve an R rating in epoxy such as E2100, A&I Coatings supplies Aluminium oxide at the following rates...

8. Should the Non-Slip Media always be white?

No, on darker surfaces coated in a clear system, a black non-slip media is likely to be less visible.

9. Is incorporation by immediate back rolling recommended?

This method ensures that the product is properly encapsulated, but can result in an uneven spread of non-slip media (from roller pick up, overlap, etc). It depends on the floor being coated and how critical appearance is over against safety and durability.

10. Is Tredgrip suitable as a non-slip coating?

Yes. Tredgrip is rated at R10, or P3 with the Wet Pendulum test. It is very good in a pedestrian situation, but is suitable for pedestrian traffic only, not vehicle traffic.

1. When casting non-slip media into a wet film, throw the grit high into the area in a sweeping motion to give as even a spread as possible. Uneven grit application will make a floor look and feel patchy – a little care and a thought out method greatly helps in the overall appearance of a non-slip floor;
2. When casting non-slip media into clear finishes, do not attempt to backroll – this will almost always give an uneven finish with double loadings of grit in some areas. Apply the grit evenly into the wet film and then overcoat the next day or as per the specification.

Please Note;

We haven't addressed adhesion in this Fact Sheet. Some substrates such as tiles are very difficult to gain adhesion to, and a sample should be always tried and tested.

We can also supply Polytex which is a polypropylene anti-slip agent. Typically you would add 230 grams to a 10 Litre pack. It can be stirred in before rolling. However it is not as hard wearing as Aluminium Oxide.

This FAQ sheet provides some guidance that must be read along with the relevant Technical Data Sheets, and it depends on the contractor having a basic understanding of how to use the coatings described. For further assistance, contact A&I Coatings on 1800 819585, or email helpdesk@aicoatings.com

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