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Independent Slip Testing Services

GLOBAL PRODUCT CLASSIFICATION

TEST RESULTS INTERPRETATION GUIDE (NEW ZEALAND)

Appendix A
Wet Pendulum Testing

Appendix B
DryFriction Testing

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SLIP RESISTANCE MEASUREMENT RESULTS INTERPRETATION GUIDE

Thank you for engaging Independent Slip Testing Services.

This guide is designed to assist in interpreting your slip resistance measurement results.

Presented in each guide are the slip resistance classifications to achieve for specific locations as per the New Zealand Standards handbook HB 197:1999.

Wet pendulum and Dry Floor Friction testing guides are presented.

ISTS test report formats are designed to meet all requirements of the current New Zealand standards while meeting all NATA (ILAC) accreditation guidelines and directives.

If you would like additional personalised guidance in the interpretation of your test reports, our team is always available to assist. Our contact details are listed below...

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As New Zealand standards are revised and NATA (ILAC) accreditation requirements allow. ISTS continually revisits test reporting formats and opportunities to make interpretation as simple and clear as possible.

Any suggestions and feedback is welcomed, and our team is always available to help wherever we can.

Thanks again, Have a successful day!
The ISTS team.



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WET TEST RESULTS INTERPRETATION GUIDE (NEW ZEALAND)

INTERPRETING WET TEST RESULTS

How to interpret your wet test report...

Wet test results offer five possible outcomes- classification 'V', 'W', 'X', 'Y' or 'Z'.

The classification 'Z' reflects a lesser slip resistant surface, while 'V' classification reflects the greatest slip resistance classification.

Step 1. If the test result classification reported meets (or exceeds) the related classification from 'TABLE 1' below, the test surface is meeting the relevant requirement.

***TABLE 1**

Pedestrian flooring selection guide- Minimum pendulum recommendations for specific locations (HB197:1999)

Location	Pendulum
1. External colonnade, walkways & pedestrian crossings	W
2. External ramps	V
3. Entry foyers hotel, office & public buildings -wet areas	X
4. Entry foyers hotel, office & public buildings -dry areas	Z
5. Shopping centre (excluding food court)	Z
6. Shopping centre food court	X
7. Internal ramps, slopes (greater than 2 degrees) -dry areas	X
8. Lift lobbies above external entry level	Z
9. Other separate shops inside shopping centres	Z
10. Other shops with external entrances- entry area	X
11. Fast food outlets, buffet food servery areas	X
12. Hospitals and aged care facilities- dry areas	Z
13. Hospitals and aged care facilities- ensuites	X
14. Supermarket aisles except fresh food areas	Z
15. Shop and supermarket fresh fruit & vegetable areas	X
16. Communal changing rooms	X
17. Swimming pool surrounds and communal shower rooms	W
18. Swimming pool ramps and stairs leading to water	V
19. Toilet facilities in offices, hotels, shopping centres	X
20. Undercover concourse areas of sports stadium	X
21. Accessible internal stair nosings (dry areas)- handrails present	X
22. Accessible internal stair nosings (wet areas)- handrails present	W
23. External stair nosings	W

***TABLE 2**

Classification of Pedestrian Surface Materials (AS/NZS.4586:2004)

Interpretation of the Wet Pendulum Results (AS/NZS.4663:2004)

Pendulum* mean BPN		Classification	Notional contribution of the floor surface to the risk of slipping when water wet
Four S rubber	TRL rubber		
>54	>44	V	(Very Low)
45-54	40-44	W	(Low)
35-44	-	X	(Moderate)
25-34	-	Y	(High)
<25	-	Z	(Very High)

TREATMENT OPTIONS

For surfaces that achieve a BPN result below the recommendations the following are options are available to increase slip resistance and Reduce Your Risk!

While ISTS is solely an audit service, following is a short list of common types of treatments we see our clients using to improve the slip resistance of various pedestrian surface materials...

Cleaning procedures	Detergent residues can build up over time with heavy detergent use.
Acid etching	For tiled surfaces. Can vary in performance with different tile types.
Wet sand/ Soda blasting	To obtain a textured finish to tiles and other hard surfaces (may require sealing).
Shot blasting	More extreme treatment to wet sand blasting (may require sealing).
Textured coatings	Ensure a consistent texture is achieved.
Surface replacement	Replacement surface may be the most cost effective option in some locations

An internet search for 'flooring treatments' will identify surface treatment professionals in your local area. ISTS recommends sourcing a number of detailed proposals when considering treatments, outlining expected slip resistance improvements, visual changes, clean ability and life expectancy.

ADDITIONAL NOTES & REFERENCES

R' Ratings The Ramp 'R' ratings are obtained using the ramp test. An 'R' rating can not be achieved for in-situ testing. There is no correlation between 'R' ratings and wet pendulum test results.

References *Table 1- HB197:1999 "An Introductory Guide to the Slip Resistance of Pedestrian Surface Materials" CSIRO 1999 and Standards Australia 1999

*Table 2- AS/NZS.4586:2004 Slip resistance classification of new pedestrian surfaces & AS/NZS.4663:2004 Slip resistance measurement of existing pedestrian surfaces

**The information provided is intended as a guide only, consult the referenced publications for further information in regards to measurement results and recommendations*



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DRY TEST RESULTS INTERPRETATION GUIDE (NEW ZEALAND)

INTERPRETING DRY TEST RESULTS

How to interpret your dry test report...

Dry test results offer two possible outcomes- classification 'F' or classification 'G'.

The classification 'G' reflects a less slip resistant surface, while the recommended 'F' classification reflects a greater slip resistant surface.

Step 1. Note the test location described in the left side column of your report, and the corresponding test result classification achieved (listed in the far right side column).

Step 2. If the test result classification listed is 'F', the test surface is meeting the relevant recommendations.

FREQUENTLY ASKED QUESTIONS

1. The mean test average is ≥ 0.40 , however the result is 'G' classification ?

A. The mean of the test results should be equal to or greater than 0.40 and each individual result should be equal to or greater than 0.35. If either of this criteria is not met, the lot shall be considered to be 'G' classification'.

2. What does * and ** indicate?

A. * Indicates part of a test run registered under 0.40.

** Indicates part of a test run registered less than 0.35 resulting in a compulsory 'G' classification'.

3. Why are test results rounded to the nearest 0.05?

A. As described in the relevant standards, the mean result of Test 1 & Test 2 is rounded to nearest 0.05.

4. What is the classification requirement for particular locations as stated in publication SS 485:2011 Annex B?

A. The New Zealand testing standard indicates floors should have a dry floor friction classification of F unless normal usage dictates that the floor should have a low dry coefficient of friction, eg. dance floors.

5. How about dry testing for external areas?

A. Dry slip resistance measurement does not apply to external surfaces. If a pedestrian surface is likely to become wet and remain wet for any significant period of time, wet pendulum testing is the appropriate test method.

6. How do I improve the slip resistance of a surface currently achieving 'G' classification?

A. Many treatments and procedures are available to improve slip resistance. Treatment options will vary depending on the type of surface and whether a sealed or unsealed finish is required. Described on the right are a list of options to improve slip resistance and Reduce Your Risk!

*TABLE 3

Classification of pedestrian surface materials according to the dry floor friction test.

Classification (Notional contribution to risk) (AS/NZS.4663:2004)	Test Result Mean Value (COF)
F (Moderate to Very Low)	≥ 0.40
G (High to Very High)	< 0.40

TREATMENT OPTIONS

For test results that achieve a result below recommendations, the following treatment options are available to increase slip resistance and Reduce Your Risk!

While ISTS is solely an audit service, following is a short list of common types of treatments we see our clients using to improve the slip resistance of various pedestrian surface materials...

Cleaning procedures	Minimising detergent residue build up or other contaminants.
Acid etching	Increasing surface texture.
Coatings and sealers	Surface coatings and penetrative types.
Surface texture	Coatings, etchants, sandblasting, shot blasting, etc.
Surface replacement	May be the most cost effective option in some instances.

An internet search for 'flooring treatments' will identify surface treatment professionals in your local area. ISTS recommends sourcing a number of detailed proposals when considering treatments, outlining expected slip resistance improvements, visual changes, clean ability and life expectancy.

ADDITIONAL NOTES & REFERENCES

References

*TABLE 1- HB197:1999 "An Introductory Guide to the Slip Resistance of Pedestrian Surface Materials" CSIRO 1999 and Standards Australia 1999

nb. The information provided is intended as a guide only, consult the referenced publications for further information in regards to measurement results and recommendations.



Independent Slip Testing Services is the global leader in accredited slip resistance measurement and classification of pedestrian surface materials.

If you are selecting, purchasing or installing pedestrian surface materials, an independent, accredited classification is a useful tool providing confidence to all stakeholders the product will perform as specified.

TILES PAVERS STONE TIMBER VINYL RUBBER METAL TAPES COATINGS GRATINGS CONCRETE
CARPETS STEP-NOSINGS TACTILES MOSAICS GLASS

Contact us any time if you have questions.
Have a successful day!

