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Independent Slip Testing Services

GLOBAL PRODUCT CLASSIFICATION

TEST REPORT

**SLIP RESISTANCE CLASSIFICATION OF
NEW PEDESTRIAN SURFACE MATERIALS
SS 485:2011**

Annex A - Wet Pendulum Test Method

Prepared For:

Jalitar Metals Pte Ltd

Product Description:

Stainless Steel Stair Nosings with 2 Recesses

Test Date:

26-07-2017

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Report Prepared for: Jalitar Metals Pte Ltd
 38 Woodlands Industrial Park E1
 #04-18/19 Singapore 757700

Page #: 1 of 1
Contract #: 8007

Test Date: 26-07-2017
Test Site: Independent Slip Testing Services- Changi
Testing Technician: M.Walton
Testing Instrument: Pendulum Skid Tester with 4S rubber (slider 96)
 Testing Instrument Serial #: SK1935 (W11)

TESTING SPECIMENS DESCRIPTION, SIZE & COATING (If applicable)			
1.	3x Stainless Steel Stair Nosings with 2 Recesses, Silver, Sample size 25x5cm		
2.	3x Stainless Steel Stair Nosings with 2 Recesses, Silver, Sample size 25x5cm		
3.	3x Stainless Steel Stair Nosings with 2 Recesses, Silver, Sample size 25x5cm		
4.	3x Stainless Steel Stair Nosings with 2 Recesses, Silver, Sample size 25x5cm		
5.	3x Stainless Steel Stair Nosings with 2 Recesses, Silver, Sample size 25x5cm		
Surface Condition:	Profiled	Cleaning:	Tested as received
Fixed/ Unfixed:	Unfixed	Rz Mean:	n/a
Environmental Conditions:	Internal- non airconditioning	Air Temp:	30 Deg.C
Direction of Test:	As indicated on underside of sample	Slope:	n/a

SS 485:2011

INTERPRETATION OF THE WET PENDULUM RESULTS		
Classification	Pendulum mean BPN (4S rubber)	Notional contribution of the floor surface to the risk of slipping when wet
V	>54	Very Low
W	45-54	Low
X	35-44	Moderate
Y	25-34	High
Z	<25	Very High

TEST RESULTS

Specimen	#1 Result:	58 bpn		
	#2 Result:	61 bpn		
	#3 Result:	60 bpn	Slider condition (P400):	81 BPN
	#4 Result:	60 bpn	Temperature adjustment:	n/a
	#5 Result:	61 bpn		

CLASSIFICATION

CLASSIFICATION	PENDULUM MEAN BPN (4S rubber)	NOTIONAL CONTRIBUTION OF THE FLOOR SURFACE TO THE RISK OF SLIPPING WHEN WET
V	60 BPN	Very Low

The mean results of the five specimens is reported (rounded to nearest whole number)

^ When an individual result both below the result classification and below the mean result minus 20% shall be considered of lower classification

DISCLAIMER:

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Signatory: Mick Walton

NATA Accreditation #14967



Testing was carried out using the Wet Test Method (Using 4S rubber slider) in accordance with Singapore Standard SS 485:2011 Appendix B.



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WET TEST RESULTS INTERPRETATION GUIDE (SG)

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 E.1' below, the test surface is meeting the relevant requirement.

***TABLE E.1**

Pedestrian flooring selection guide -Minimum pendulum recommendations for specific locations (SS 485 : 2011 Annex E)

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**

Slip Resistance Classification of Public Pedestrian Surface Materials (SS 485 : 2011)

Mean British Pendulum Number (BPN) (Four S rubber)	Classification (Annex E)	Notional contribution of the floor surface to the risk of slipping when wet
> 54	V	(Very Low)
45 to 54	W	(Low)
35 to 44	X	(Moderate)
25 to 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 E.1 - SS 485 : 2011 Slip resistance classification of public pedestrian surface materials.
 *Table 2 - SS 485 : 2011 Slip resistance classification of public pedestrian surface materials

**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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TEST PRODUCT IMAGE

Product Description: Stainless Steel Stair Nosings with 2 Recesses

Test Date: 26-07-2017

