

OSLO

This unique terrazzo inspired, one of a kind porcelain tile expresses a very strong and explicit style. The Oslo has a timeless colour palette finished with a concrete look to provide a modern edge. It is available in a variety of contemporary surface options making it a whole house experience.



GNS CERAMICS
EXCLUSIVELY WHOLESALE

OSLO









450x900mm
Matt
Lappato
External

600x600mm
Matt
Lappato
External

300x600mm
Lappato

300x300mm
Matt

Floor Cat. 4

P5
External finish

V2
Variation

Rectified Edge

P3
Matt finish

Glazed Porcelain

GNS Ceramics recommends that our retail shops pass on the following information to the installer and end-user.

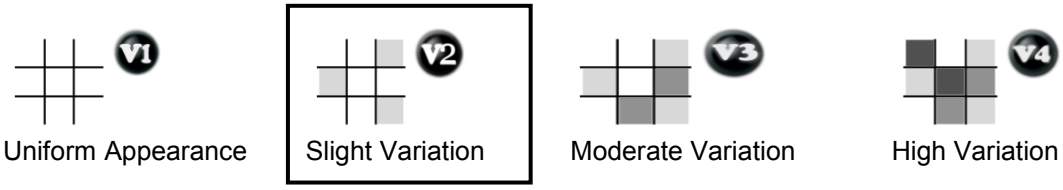
Ceramic tiles are only one component of a much larger building system. It is our experience that failure of any tiling system is very often the result of a combination of factors. For example; inappropriate design, type of substrate, surface preparation, temperature during installation, adhesives, incompatibility of products, product failure, environmental factors skill and knowledge of the installers etc; the latter being supplied or controlled by a variety of manufacturers and tradesmen. GNS Ceramics has no involvement in the design, selling and installation processes and once goods have been dispatched from our warehouse we have no control over where and how these products are used. As a result the project manager, and or the tiler are the only people in a position to ensure that all the components used in a project are compatible and that the product is installed in accordance with the Australian Building Code and the Australian Standards.

Installation Instructions for all types of tiles can be found in the GNS Ceramics Price List, and on our website. We suggest these are followed at all times.

Cleaning and Maintenance

Do not use abrasive cleaners and chemicals which could permanently scratch and damage the surface of the tile. For daily cleaning we recommend the use of a mild PH Neutral detergent. Should a more vigorous cleaning programme be required we recommend the use of a proprietary tile cleaner from a specialty tile supplier.

Colour & Pattern Variation Guide



Uniform Appearance | Slight Variation | Moderate Variation | High Variation

Slip Resistance

The best way to minimise the risk of slipping is through safe design principals. This involves a risk management approach which evaluates the likelihood and consequence of an incident to occur. Slip resistive flooring is only one of the design components to consider, other design features should also be considered, including awnings, airlocks, matting and a suitable cleaning regime to reduce the extent of contaminates. Visual aids, warning signs, handrails and lighting, along with the footwear to be worn, should also be considered.

All ceramic tiles can be slippery, particularly when wet. This includes tiles, commonly used in wet areas such as bathrooms. It is important that customers be aware of the potential danger of wet ceramic tiles and seek advice from the retailer as to the level of slip-resistance of any particular tile, and its suitability for the intended application. If there is any doubt, tiles should be tested for slip-resistance immediately after being laid, under the conditions that they will be subject to during use. While tiles may achieve an acceptable standard in a laboratory test, it is quite probable that the performance in-situ will be less than expected, due to installation methods, wear & tear, cleaning regimes and unforeseen circumstances. Test results should therefore to be seen as a relative guide to estimate the merits of one tile versus another and should be used in conjunction with the Australian Building Code and the relevant Australian Standards. Further information on slip resistance is provided in the Australian Standards HB198:2014 - An Introductory guide to the slip resistance of pedestrian surface materials.

There are many factors beyond the control of the supplier that can affect the level of slip-resistance of tiles, or contribute to the incidents of injury through slipping. Consequently, the laboratory test results presented here must not be viewed to mean that GNS Ceramics Pty Ltd, is providing any warranty, nor will accept any liability for personal injury or accidents arising from the selection or installation of tiles under any circumstances.

Classes of Use

The classification has taken into account the recommendations of the Australian Standards; however, they are given for general guidance only. They are valid for the given application under **NORMAL CONDITIONS** and should not be taken to provide accurate product specifications for specific requirements.

WARNING: Other standards and building code requirements may affect your selection of tiles.

Consideration should be given to the footwear, type of pedestrian traffic and cleaning methods expected. Floors should be adequately protected against soiling from following trades during installation; they should also be protected against scratching dirt at the entrances to building by interposing footwear cleaning devices. For example, mats, shoe scrapers, static devices, etc.

CLASS 4 - Floor coverings that are walked on by regular traffic with some scratching dirt so that conditions are more severe than CLASS 3; For example, entrances, laundries with external access, living areas, entertainment areas, patio's, sales rooms, motels.

中国认可
国际互认
检测
TESTING
CNAS L1978

160000122473

检 测 报 告
TEST REPORT

报 告 编 号:
REPORT NO. : 25201703727

样 品 名 称:
NAME OF SAMPLE: 奥斯陆（止滑面）
OSLO (ANTI-SLIP)

委 托 单 位:
APPLICANT: 佛山市费罗娜陶瓷有限公司
FLORINA INDUSTRY CO.,LTD.

检 验 日 期:
DATE OF TEST: 18/08/2017 – 29/08/2017 (dd/mm/yy)

国 家 建 筑 卫 生 陶 瓷 检 测 重 点 实 验 室
STATE KEY TESTING LABORATORY OF BUILDING CERAMICS AND SANITARY WARE
佛山出入境检验检疫局检验检疫综合技术中心
INSPECTION AND QUARANTINE COMPREHENSIVE TECHNOLOGY CENTRE
OF FOSHAN ENTRY-EXIT INSPECTION & QUARANTINE BUREAU

佛山出入境检验检疫局检验检疫综合技术中心
INSPECTION AND QUARANTINE COMPREHENSIVE TECHNOLOGY CENTRE OF FOSHAN ENTRY-EXIT INSPECTION & QUARANTINE BUREAU

检测报告
TEST REPORT

报告编号： 25201703727 共 6 页 第 2 页
Report No: Page 2 of 6

样品名称 Name of sample	奥斯陆（止滑面） OSLO (ANTI-SLIP)	名义尺寸 Nominal size (N)	60cm×60cm
表面特性 Nature of the surface	有釉砖 Glazed (GL)	工作尺寸 Work size (S_w)	600mm×600mm×9.7mm
类别 Group	B Ⅰa	样品描述 Description of Samples	样品完好,适合测试 The samples are sound, intact and fit for test.
样品标记 Mark of samples	/	样品数量 Quantity of samples	30 块 30 Pieces
委托单位 Applicant	佛山市费罗娜陶瓷有限公司 FLORINA INDUSTRY CO.,LTD.	委托单位地址 Address of applicant	佛山市禅城区凤凰路隔田坊 64 号 1506 创意城 B 区 2 号楼 BUILDING #2, GENGTIANFANG 64 (1506 CREATIVE CITEY), FENGHUANG RD, FOSHAN, CHINA
委托单位电话 Telephone of applicant	86-13760908400	委托单位传真 Fax of applicant	86-757-82274414
样品来源 Source of Samples	委托单位自送样品 Samples selected by applicant	接样日期 Received on	18/08/2017
检验依据 Test Standard	ISO 13006:2012 *Ceramic tiles – Definitions, classification, characteristics and marking* Annex G Dry-pressed ceramic tiles with low water absorption $E_b \leq 0,5$ % Group B Ⅰa		
检验结论 Conclusion of Test	样品经检验,所检验项目的检验结果符合 ISO 13006:2012 标准中附录 G 的规定。 The results conform to the requirement of Annex G of standard ISO 13006:2012 with respect to the test items.		
检验单位盖章 Stamp of Test Unit	日期：05/09/2017 Date:	检验单位联系方式 Address of Test Unit	地址：广东省佛山市禅城区魁奇一路澜石（国际）金属交易中心十八座二楼 Address : 2/F, Building 18, Lanshi International Metal Exchange Center, Kuiqiyi Road, Chancheng District, Foshan, Guangdong, China (528000) 电话（Tel）：86-757-83960558 86-757-83827991 传真（Fax）：86-757-83827971 邮箱（E-mail）：fsiqtc@163.com 网址（url）：http://www.fsiqtc.com/
声明 Notes	1、我们已尽所知所能实施上述检验，不能因签发本报告而免除有关各方根据合同和法律所承担的责任和义务； All inspections are carried out conscientiously to the best of our knowledge and ability. This report does not in any respect absolve the other related parties from his contractual and legal obligations. 2、未经本实验室书面许可，不得部分复制本报告； This report shall not be reproduced, except in full, without the prior written approval from the issuing laboratory. 3、本报告仅是样品的检测结果。 The results in this report apply to the samples only.		

检验 Tested by 黄静 审核 Inspected by 袁其州 批准 Approved by 肖景亿

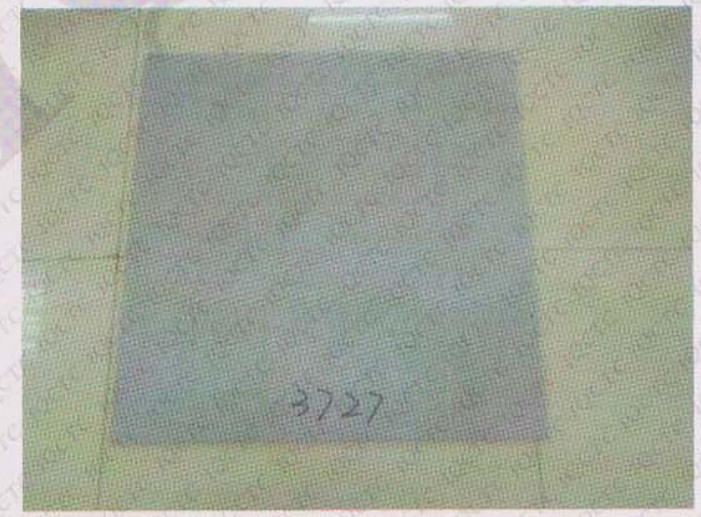
FSIQTC-T 2(1)/A

检测报告
TEST REPORT

报告编号： 25201703727
Report No:

样品照片
Photo of Samples





ISO 13006:2012 *Ceramic tiles – Definitions, classification, characteristics and marking*

条款 Clause	性能 Properties	检验方法 Test Method	要求 Requirements		检验结果 Results	判定 Verdicts
附录 G 表 G.1 Annex G Table G.1	尺寸和表面质量 **Dimensions and surface quality**					
	长度和宽度 **Length and Width** 每块砖的平均尺寸相对于工作尺寸的允许偏差 The deviation,of the average size for each tile (4 sides) from the work size	ISO10545-2	N≥15cm	±0.6%	-0.05%~-0.04%	P
				±2.0mm	-0.3mm~-0.2mm	P
	厚度 **Thickness**					
	制造商应声明厚度 The thickness shall be specified by the manufacturer	—	声明厚度 Declared thickness		9.7mm	—
	每块砖厚度的平均值相对于工作尺寸的最大允许偏差 The deviation of the average thickness of each tile from the work size thickness	ISO10545-2	N≥15cm	±5%	-0.4%~+1.2%	P
				±0.5mm	0~+0.1mm	P
	边直度 **Straightness of sides** 相对于工作尺寸的最大允许偏差 The maximum deviation from straightness related to the corresponding work sizes	ISO10545-2	N≥15cm	±0.5%	-0.02%~+0.01%	P
				±1.5mm	-0.1mm~+0.1mm	P
	直角度 **Rectangularity** 相对于工作尺寸的最大允许偏差 The maximum deviation from Rectangularity related to the corresponding work sizes	ISO10545-2	N≥15cm	±0.5%	+0.05%~+0.07%	P
				±2.0mm	+0.3mm~+0.4mm	P
	表面平整度：最大允许偏差 **Surface flatness**: The maximum deviation from flatness					
	a)对于由工作尺寸计算的对角线的中心弯曲度 a) centre curvature, related to diagonal calculated from the work size;	ISO10545-2	N≥15cm	±0.5%	+0.05%~+0.07%	P
				±2.0mm	+0.5mm~+0.6mm	P
	b)对于由工作尺寸计算的边弯曲度 b) edge curvature, related to the corresponding work sizes;	ISO10545-2	N≥15cm	±0.5%	+0.03%~+0.04%	P
				±2.0mm	+0.2mm~+0.3mm	P
	c)对于由于工作尺寸计算的对角线的翘曲度 c) warpage, related to diagonal calculated from the work size.	ISO10545-2	N≥15cm	±0.5%	-0.02%~-0.01%	P
				±2.0mm	-0.2mm~-0.1mm	P
	表面质量 **Surface quality**	ISO10545-2	至少有 95%的砖其主要区域无明显缺陷 A minimum of 95% of the tiles shall be free from visible defects inspected vertically at 1.0m.		100%	P

检测报告
TEST REPORT

报告编号： 25201703727 共 6 页 第 5 页
Report No: Page 5 of 6

ISO 13006:2012 *Ceramic tiles – Definitions, classification, characteristics and marking*

条款 Clause	性能 Properties	检验方法 Test Method	要求 Requirements	检验结果 Results	判定 Verdicts
附录 G 表 G.1 Annex G Table G.1	物理性能 **Physical properties**				
	吸水率 质量分数 **Water absorption** Percent mass fraction	ISO 10545-3	E_b≤0.5%	0.07%	P
			单个值不大于 0.6% Individual maximum 0.6%	0.06%～0.09%	P
	破坏强度/N **Breaking strength, in N**	ISO 10545-4	≥1300	2296	P
	断裂模数/(N/mm²) **Modulus of rupture, in N/mm²** 不适用于破坏强度≥ 3000N 的陶瓷砖 Not applicable to tiles with breaking strength ≥ 3000N	ISO 10545-4	平均值≥35 Minimum 35	43.5	P
			单个值≥32 Individual minimum 32	41.6～44.3	P
	抗冲击：恢复系数 **Impact resistance:** Coefficient of restitution (COR)	ISO 10545-5	报告检验结果 Test method available	0.88	—
	耐磨性 **Abrasion resistance** 用于地面的有釉砖的表面耐磨性 Resistance to surface abrasion of glazed tiles intended for use on floors	ISO 10545-7	报告耐磨级别 Report abrasion class	3 级 Class 3	—
			报告耐磨转数 Report cycles passed	1500	—
	线性热膨胀系数：室温~100℃ **Coefficient of linear thermal expansion**: from ambient temperature to 100℃	ISO 10545-8	报告检验结果 Test method available	6.3×10^{-6}℃$^{-1}$	—
	抗热震性 **Thermal shock resistance**	ISO 10545-9	报告检验结果 Test method available	样品经试验，无炸裂或裂纹 Fully resistance	—
	湿膨胀/(mm/m) **Moisture expansion, in mm/m**	ISO 10545-10	报告检验结果 Test method available	0.01	—
	抗冻性 **Frost resistance**	ISO 10545-12	报告检验结果 Test method available	所有样品无裂纹或破损 Fully resistance	P
	抗釉裂性：有釉砖 **Crazing resistance**: glazed tiles	ISO 10545-11	应通过此项测试 Required	样品经试验，无裂纹或剥落 Fully resistance	P
	化学性能 **Chemical properties**				
	耐污染性 **Resistance to staining**				
	a)轻油中的铬绿 a) Green staining agent in light oil	ISO 10545-14	不低于 3 级 Minimum Class 3	4 级 Class 4	P
	b)轻油中的红色污染物 b) Red staining agent in light oil	ISO 10545-14	不低于 3 级 Minimum Class 3	4 级 Class 4	P
	c) 13g/L 碘酒液 c) Iodine, 13g/L solution in alcohol	ISO 10545-14	不低于 3 级 Minimum Class 3	5 级 Class 5	P
	d)橄榄油 d) Olive oil	ISO 10545-14	不低于 3 级 Minimum Class 3	4 级 Class 4	P

检测报告
TEST REPORT

报告编号： 25201703727 共 6 页 第 6 页
Report No: Page 6 of 6

ISO 13006:2012 *Ceramic tiles – Definitions, classification, characteristics and marking*

条款 Clause	性能 Properties	检验方法 Test Method	要求 Requirements	检验结果 Results	判定 Verdicts
附录 G 表 G.1 Annex G Table G.1	**耐化学腐蚀性 Resistance to chemicals**				
	耐家庭化学试剂和游泳池盐类 Resistance to household chemicals and swimming pool salts				
	a) 家庭化学试剂：氯化铵溶液，100g/L a) Household chemicals: Ammonium chloride, 100g/L	ISO 10545-13	不低于 GB Minimum GB	GA	P
	b) 游泳池盐类：次氯酸钠溶液，20mg/L b) Swimming pool salts: Sodium hypochlorite solution, 20mg/L	ISO 10545-13	不低于 GB Minimum GB	GA	P
	耐低浓度酸和碱 Resistance to low concentrations of acids and alkalis				
	a) 3%盐酸溶液(v/v) a) Hydrochloric acid solution, 3% (v/v)	ISO 10545-13	制造商应声明等级 Manufacturer to state classification	GLA	—
	b) 柠檬酸溶液，100g/L b) Citric acid solution, 100g/L	ISO 10545-13	制造商应声明等级 Manufacturer to state classification	GLA	—
	c) 氢氧化钾溶液，30g/L c) Potassium hydroxide, 30g/L	ISO 10545-13	制造商应声明等级 Manufacturer to state classification	GLA	—
	耐高浓度酸和碱 Resistance to high concentrations of acids and alkalis				
	a) 18%盐酸溶液(v/v) a) Hydrochloric acid solution, 18% (v/v)	ISO 10545-13	报告检验结果 Test method available	GHA	—
	b) 5 %乳酸溶液(v/v) b) Lactic acid, 5 % (v/v)	ISO 10545-13	报告检验结果 Test method available	GHA	—
	c) 氢氧化钾溶液，100g/L c) Potassium hydroxide, 100g/L	ISO 10545-13	报告检验结果 Test method available	GHA	—
	铅镉溶出量 Lead and Cadmium release				
	a)铅溶出量/(mg/dm^2) a) Lead release, in mg/dm^2	ISO 10545-15	报告检验结果 Test method available	<0.01	—
	b)镉溶出量/(mg/dm^2) b) Cadmium release, in mg/dm^2	ISO 10545-15	报告检验结果 Test method available	<0.002	—

用语说明 Possible test case verdicts
1. P(ass)：合格 *Test item does meet the requirement.*
2. F(ail)：不合格 *Test item does not meet the requirement.*
3. —：未进行判定 *Verdict was not carried out.*
4. N/A：不适用 *Test case does not apply to the test item.*

*** ***
报告结束 End of Test Report

ON SITE WET & DRY FLOOR SLIP TESTING SERVICES
Over 15 years experience in Slip Prevention Technology

ABN 51 590 707 895
27 Thomas Mitchell Road Killarney Vale NSW 2261
PH: 1300 Sliptest (1300 754 783)

SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS AS 4586 (2013) "Appendix A" (Wet Pendulum Method)

Client:	GNS Ceramics Pty Ltd	**Client Address**	3 Cox Place, Glendenning. NSW 2761				
Project:	Test tile samples as supplied						
Property Tested:	3 Cox Place, Glendenning. NSW 2761	**Date**	**21/082017**	**Test Report**	**210820171**	**Issue Date**	**22/08/2017**

Testing was carried out using the Wet Test Method, using Type 96 (4S) rubber slider, in accordance with Australian Standard AS 4586 Appendix A. Slider was conditioned/prepared using P400 abrasive paper and 3 µm pink lapping film.

Description of test sample (including any surface coatings, contamination and wear).	Specimen Number	Test Location	Test Type Fixed/ Unfixed	Surface Gradient Degrees	Type and extent of cleaning performed	Results of last three swings British Pendulum Number			Mean BPN Value (SRV)	Slope correction value (SCV)	Comments
Number of specimens tested 5											
298 mm x 298 mm Porcelain "Florina Oslo Series" Tile. Honed Finish Samples clean and in good condition.	**1**	**Tile 1**	**Unfixed**	**<1.5°**	Water only. Samples tested in "as found" condition.	43	42	42	**42**	**Not Applicable**	
	2	**Tile 2.**	**Unfixed**	**<1.5°**		43	43	42	**43**	**Not Applicable**	
	3	**Tile 3.**	**Unfixed**	**<1.5°**		43	43	42	**43**	**Not Applicable**	
	4	**Tile 4.**	**Unfixed**	**<1.5°**		44	43	43	**43**	**Not Applicable**	
	5	**Tile 5.**	**Unfixed**	**<1.5°**		42	42	41	**42**	**Not Applicable**	

Comments				Mean BPN Slip Resistance Value (SRV)	43	Classification Without SCV	P3
Temperature:	14°C	Weather	Indoors				

Testing Officer & Signatory
Mark McKay

Testing Instrument: Munro Portable Skid Tester #1109
Calibration Date: 12th May 2017

The AS 4586 standard provides a guide and recommendation for use, we recommend that this test report be read in conjunction with AS 4586 and Handbook HB 198:2014. The results in this test do not account for any future wear contamination or maintenance of this surface. Sliptest NSW or our agents, licensees or employees accept no responsibility for any actions whatsoever which may arise as a result of this test report, all information within this report is copyright and is protected by copyright law.

NATA ACCREDITED FOR TECHNICAL COMPETENCE

Sliptest NSW
Materials Testing Laboratory – Accreditation No: 18615
27 Thomas Mitchell Rd, Killarney Vale. NSW 2261

Accredited for compliance with ISO/IEC 17025. The results of the tests, calibrations and/or measurements are traceable to Australian/National standards

For information regarding Slope Correction Values, please refer to Appendix F of AS 4586 and HB 198 Tables 3A and 3B.

Notes / Remarks / Variations

1	Fixed Test: Testing is performed in the anticipated direction of pedestrian travel.
2	Unfixed Test: Testing is performed in the direction of least anticipated slip resistance
3	

Controlled Document TR 4586 4S version 5 04.01.16 **Page 1 of 1**

ON SITE WET & DRY FLOOR SLIP TESTING SERVICES
Over 15 years experience in Slip Prevention Technology

ABN 51 590 707 895
27 Thomas Mitchell Road Killarney Vale NSW 2261
PH: 1300 Sliptest (1300 754 783)

SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS AS 4586 (2013) "Appendix A" (Wet Pendulum Method)

Client:	GNS Ceramics Pty Ltd	**Client Address**	3 Cox Place, Glendenning. NSW 2761				
Project:	Test tile samples as supplied						
Property Tested:	3 Cox Place, Glendenning. NSW 2761	**Date**	**21/082017**	**Test Report**	**210820172**	**Issue Date**	**22/08/2017**

Testing was carried out using the Wet Test Method, using Type 96 (4S) rubber slider, in accordance with Australian Standard AS 4586 Appendix A. Slider was conditioned/prepared using P400 abrasive paper and 3 µm pink lapping film.

Description of test sample (including any surface coatings, contamination and wear).	Specimen Number	Test Location	Test Type Fixed/ Unfixed	Surface Gradient Degrees	Type and extent of cleaning performed	Results of last three swings British Pendulum Number			Mean BPN Value (SRV)	Slope correction value (SCV)	Comments
Number of specimens tested 5											
298 mm x 298 mm Porcelain "Florina Oslo Series" Tile. Anti Slip Finish. Samples clean and in good condition.	**1**	**Tile 1**	**Unfixed**	**<1.5°**	Water only. Samples tested in "as found" condition.	57	57	57	**57**	**Not Applicable**	
	2	**Tile 2.**	**Unfixed**	**<1.5°**		59	59	58	**59**	**Not Applicable**	
	3	**Tile 3.**	**Unfixed**	**<1.5°**		57	57	57	**57**	**Not Applicable**	
	4	**Tile 4.**	**Unfixed**	**<1.5°**		59	58	58	**58**	**Not Applicable**	
	5	**Tile 5.**	**Unfixed**	**<1.5°**		60	60	60	**60**	**Not Applicable**	

Comments				Mean BPN Slip Resistance Value (SRV)	58	Classification Without SCV	P5
Temperature:	**14°C**	**Weather**	**Indoors**				

Testing Officer & Signatory
Mark McKay

Testing Instrument: Munro Portable Skid Tester #1109
Calibration Date: 12th May 2017

The AS 4586 standard provides a guide and recommendation for use, we recommend that this test report be read in conjunction with AS 4586 and Handbook HB 198:2014. The results in this test do not account for any future wear contamination or maintenance of this surface. Sliptest NSW or our agents, licensees or employees accept no responsibility for any actions whatsoever which may arise as a result of this test report, all information within this report is copyright and is protected by copyright law.

NATA ACCREDITED FOR TECHNICAL COMPETENCE

Sliptest NSW
Materials Testing Laboratory – Accreditation No: 18615
27 Thomas Mitchell Rd, Killarney Vale. NSW 2261

Accredited for compliance with ISO/IEC 17025. The results of the tests, calibrations and/or measurements are traceable to Australian/National standards

For information regarding Slope Correction Values, please refer to Appendix F of AS 4586 and HB 198 Tables 3A and 3B.

Notes / Remarks / Variations

1	Fixed Test: Testing is performed in the anticipated direction of pedestrian travel.
2	Unfixed Test: Testing is performed in the direction of least anticipated slip resistance
3	

Controlled Document TR 4586 4S version 5 04.01.16 **Page 1 of 1**