GNS CERAMICS
EXCLUSIVELY WHOLESALE

Karst-Stone

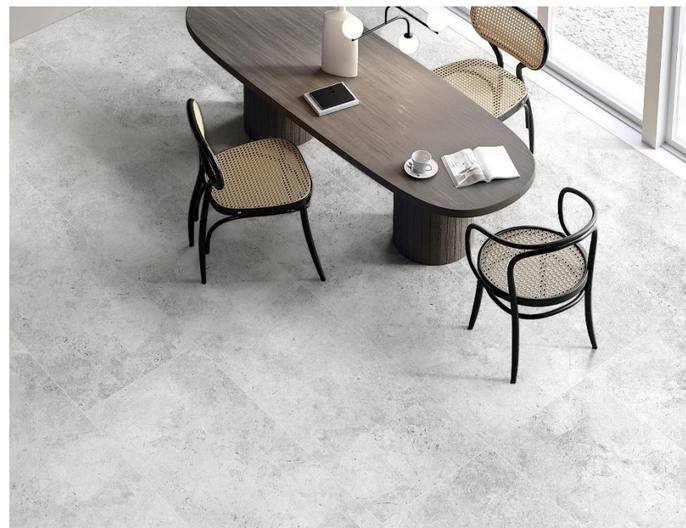


Introducing the Karst-Stone Series; the epitome of natural elegance and enduring strength. Crafted from the finest materials, our tiles bring the timeless beauty of karst landscapes into your home. Each tile is a testament to the artistry of earth's geological processes, featuring unique patterns that evoke the intricate details of limestone formations. Durable, versatile, and easy to maintain, Karst Stone tiles are perfect for those who seek to infuse their spaces with the charm of the natural world. Elevate your design with the sophistication of Karst Stone, where every tile holds the story of the earth.





The Karst-Stone origin story is a compelling narrative of transformation over millions of years. They embody resilience and change, echoing the dynamic history of our planet. Whether it's the iconic Stone Forest of China or the serene cenotes of Mexico, karst landscapes captivate with their mysterious allure and geological significance.



Karst stone, a testament to nature's artistry, originates from a remarkable geological process where soluble carbonate rocks like limestone, dolomite, and gypsum undergo dissolution. This intricate process crafts a unique topography characterized by stunning features such as underground drainage systems, sinkholes, and majestic caves. The term 'karst' itself hails from the Karst region, a limestone plateau near the Adriatic Sea, where early research into these fascinating landscapes began.

Images: (Clockwise from left)
1) Karst-Stone Grey
2) Karst-Stone Beige
3) Karst-Stone White
Cover (Top) Karst-Stone Beige
Cover (Bottom) Karst-Stone Charcoal

Karst-Stone

GNS CERAMICS
EXCLUSIVELY WHOLESALE

White



Beige



Grey



Charcoal



150x150mm
Matt P3

75x230mm
Matt P3

600x600
Honed
Matt P4

300x600mm
Honed
Matt P4

600x1200mm
Honed

400x600x20mm
Square Edge
Coper P4

600x600x20mm
Paver P4

Glazed Porcelain | Cushioned Edge | P3 | Technical Porcelain | V3 Variation | Floor Cat. 3 | Floor Cat. 4 | Rectified Edge | P4 | 16

150x150mm & 75x230mm

Honed

Matt & Paver

600x600

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

Click or Scan for Installation Instructions

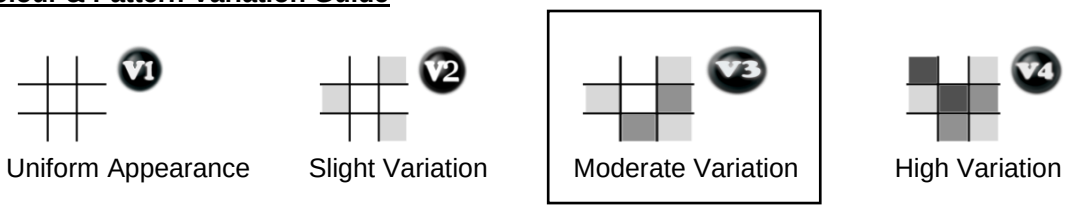
Ceramic tiles are only one component of a much larger building system. It is our experience that failure of any tiling system is very often the result of a combination of factors. For example; inappropriate design, type of substrate, surface preparation, temperature during installation, adhesives, incompatibility 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 3 - Floor coverings in areas that, with normal footwear, are walked on more often with small amounts of scratching dirt; for example, living areas, bedrooms, residential kitchens, laundries with internal access, halls and corridors. This does not apply to abnormal footwear; i.e. work boots and outdoor shoes.

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

190000122473

TEST REPORT

REPORT NO. 25201904594

NAME OF SAMPLES CERAMIC TILES

APPLICANT SHENYANG HAOSONG CERAMIC CO. LTD

MANUFACTURER SHENYANG HAOSONG CERAMIC CO. LTD

DATE OF INSPECTION 22/10/2019 – 29/10/2019(DD/MM/YY)

STATE KEY TESTING LABORATORY OF BUILDING CERAMICS AND SANITARY WARE
INSPECTION AND QUARANTINE COMPREHENSIVE TECHNOLOGY CENTRE OF
FOSHAN ENTRY-EXIT INSPECTION & QUARANTINE BUREAU

扫描全能王 创建

INSPECTION AND QUARANTINE COMPREHENSIVE TECHNOLOGY CENTRE OF FOSHAN ENTRY-EXIT INSPECTION & QUARANTINE BUREAU

TEST REPORT

Report No: 25201904594

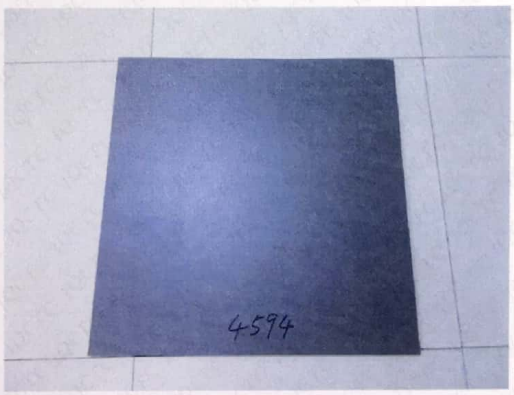
Name of Sample	**CERAMIC TILES**	**Nominal Size**	**60cm×60cm**
Type	**GLAZED**	**Work size**	**600mm×600mm×9.3mm**
Group	**B I a**	**Quantity of Samples**	**30 Pieces**
Mark of Samples	**M1**	**Description of Samples**	**The samples are sound, intact and fit for test.**
Manufacturer	**SHENYANG HAOSONG CERAMIC CO. LTD**	**Address of Manufacturer**	**—**
Telephone of Manufacturer	**—**	**Fax of Manufacturer**	**—**
Samples selected by	**Name: MUHAMAD MUZHAFAR FIKRI BIN ISMAIL Institution: SIRIM QAS INTERNATIONAL SDN. BHD. Date: 10/10/2019**	**Received on**	**21/10/2019**
Test Standard	**MS ISO 13006:2014 *Ceramic tiles – Definitions, classification, characteristics and marking***		
Conclusion of Test	**The results conform to the requirement of standard MS ISO 13006:2014 with respect to the test items.**		
Stamp of Inspection Unit	**Date: 04/11/2019**	**Address of Test Unit**	**Address: 2/F, Building 18, Lanshi International Metal Exchange Center, Kuiqiyi Road, Chancheng District, Foshan, Guangdong, China (528000) Tel: 86-757-83960558 86-757-83827991 Fax: 86-757-83827971 E-mail: fsiqtc@163.com Url: http://www.fsiqtc.com/**
Notes	**1. 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. This report shall not be reproduced, except in full, without the prior written approval from the issuing laboratory. 3. The results in this report apply to the samples only.**		

Tested by 杨明星 **Inspected by** 黄江伟 **Approved by** 肖.李.12

FSIQTC-T 2(2)/A

扫描全能王 创建

TEST REPORT

Description of Samples	**The samples are sound, intact and fit for test.**
Photo of Samples	 

扫描全能王 创建

TEST REPORT

MS ISO 13006:2014 *Ceramic tiles – Definitions, classification, characteristics and marking*

Clause	Properties	Test Method	Requirements		Results	Verdicts
Annex G Table G.1	**Dimensions and surface quality**					
	Length and width The deviation, of the average size for each tile from the work size	MS ISO 10545-2:2002	N≥15cm	±0.6%	0~+0.01%	P
				±2.0mm	0~+0.1mm	P
	Thickness The deviation of the average thickness of each tile from the work size thickness	MS ISO 10545-2:2002	N≥15cm	±5%	+0.4%~+1.7%	P
				±0.5mm	0 ~+0.2mm	P
	Straightness of sides The maximum deviation from straightness related to the corresponding work sizes	MS ISO 10545-2:2002	N≥15cm	±0.5%	-0.01%~+0.01%	P
				±1.5mm	-0.1mm~+0.1mm	P
	Rectangularity The maximum deviation from Rectangularity related to the corresponding work sizes	MS ISO 10545-2:2002	N≥15cm	±0.5%	-0.06%~+0.08%	P
				±2.0mm	-0.4mm~+0.5mm	P
	Surface flatness: The maximum deviation from flatness					
	a) centre curvature, related to diagonal calculated from the work size;	MS ISO 10545-2:2002	N≥15cm	±0.5%	-0.03%~-0.02%	P
				±2.0mm	-0.2mm~-0.1mm	P
	b) edge curvature, related to the corresponding work sizes;	MS ISO 10545-2:2002	N≥15cm	±0.5%	-0.05%~-0.02%	P
				±2.0mm	-0.3mm~-0.2mm	P
	c) warpage, related to diagonal calculated from the work size.	MS ISO 10545-2:2002	N≥15cm	±0.5%	+0.02%~+0.04%	P
				±2.0mm	+0.2mm ~+0.3mm	P
	Surface quality	MS ISO 10545-2:2002	A minimum of 95% of the tiles shall be free from visible defects inspected vertically at 1.0m.		100%	P
	Physical properties					
	Water absorption Percent mass fraction	MS ISO 10545-3:2001	E_b≤0.5%		0.17%	P
			Individual maximum 0.6%		0.16%~0.19%	P
	Breaking strength, in N	MS ISO 10545-4:2003	≥1300		1899	P

扫描全能王 创建

TEST REPORT

MS ISO 13006:2014 *Ceramic tiles – Definitions, classification, characteristics and marking*

Clause	Properties	Test Method	Requirements	Results	Verdicts
Annex G Table G.1	**Modulus of rupture, in N/mm²** Not applicable to tiles with breaking strength ≥ 3000N	MS ISO 10545-4:2003	Minimum 35	39.3	P
			Individual minimum 32	37.2~41.1	P
	Abrasion resistance Resistance to surface abrasion of glazed tiles intended for use on floors	MS ISO 10545-7:2001	Report abrasion class	Class 3	—
			Report cycles passed	750	—
	Crazing resistance: glazed tiles	MS ISO 10545-11:2001	Required	Fully resistance	P
	Chemical properties				
	Resistance to chemicals				
	Resistance to household chemicals and swimming pool salts				
	a) Household chemicals: Ammonium chloride, 100g/L	MS ISO 10545-13:2018	Minimum GB	A	P
	b) Swimming pool salts: Sodium hypochlorite solution, 20mg/L	MS ISO 10545-13:2018	Minimum GB	A	P
	Resistance to low concentrations of acids and alkalis				
	a) Hydrochloric acid solution, 3% (v/v)	MS ISO 10545-13:2018	Manufacturer to state classification	LA	—
	b) Citric acid solution, 100g/L	MS ISO 10545-13:2018	Manufacturer to state classification	LA	—
	c) Potassium hydroxide, 30g/L	MS ISO 10545-13:2018	Manufacturer to state classification	LA	—
	Resistance to high concentrations of acids and alkalis				
	a) Hydrochloric acid solution, 18% (v/v)	MS ISO 10545-13:2018	Test method available	HA	—
	b) Lactic acid, 5 % (v/v)	MS ISO 10545-13:2018	Test method available	HA	—
	c) Potassium hydroxide, 100g/L	MS ISO 10545-13:2018	Test method available	HA	—
	Resistance to staining				
	a) Green staining agent in light oil	MS ISO 10545-14:2018	Minimum Class 3	Class 5	P
	b) Red staining agent in light oil	MS ISO 10545-14:2018	Minimum Class 3	Class 5	P
	c) Iodine, 13g/L solution in alcohol	MS ISO 10545-14:2018	Minimum Class 3	Class 5	P
	d) Olive oil	MS ISO 10545-14:2018	Minimum Class 3	Class 5	P

Possible test case verdicts
1. P(ass) : *Test item does meet the requirement.*
2. F(ail) : *Test item does not meet the requirement.*
3. —: *Verdict was not carried out.*
4. N/A : *Test case does not apply to the test item.*

*** ***
End of Test Report

扫描全能王 创建

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
佛山海关综合技术中心
COMPREHENSIVE TECHNOLOGY CENTRE OF FOSHAN CUSTOMS
INSPECTION & QUARANTINE TECHNOLOGY CENTER
190000122473
中国认可 国际互认 检测 TESTING CNAS L1978

检 测 报 告
TEST REPORT

报告编号:
Test report No.: **25202428800**

委托单位： Applicant：	梵雅诺国际有限公司 MAX GLORY INTERNATIONAL LIMITED
委托单位地址： Address of Applicant:	佛山市顺德区乐从镇乐从社区居委会佛山新城天虹路信保广场南塔 23 楼 23RD FLOOR, SOUTH TOWER, CITIC POLY PLAZA, TIANHONG RD, LECONG TOWN, SHUNDE DISTRICT, FOSHAN CITY, GUANGDONG PROVINCE, P.R.CHINA 528000
样品名称： Name of Sample:	釉面砖 GLAZED FLOOR TILES

样品记号： Mark of Samples:	KS6002# M1A31	样品规格： Sizes of Sample:	600mm × 600mm
样品来源： Source of Samples:	委托单位自送样品 Samples selected by applicant	样品数量： Quantity of Samples:	4 片 4 Pieces
接样日期： Received on:	2024-06-12	检验日期： Test Date:	2024-06-13

检验依据：
Test Standard: AS 4586-2013/Amdt 1-2017 *Slip resistance classification of new pedestrian surface materials*

检验结果：
Results of Inspection：

检验项目 Test Item	检验方法 Test Method	检验结果 Test Result
防滑性能，摆锤法，湿法， Slider 96 Slip resistance, Wet pendulum test method, Slider 96	AS 4586-2013/Amdt 1-2017 Appendix A **附录** A	SRV: 49 **类别** Class: P4

*** ***

报告结束 End of Test Report

检验单位盖章
Stamp of inspection unit

COMPREHENSIVE TECHNOLOGY CENTRE OF FOSHAN CUSTOMS (6) 佛山海关综合技术中心 检验检测专用章

授权签字人：
Authorized Signatory 肖景红
XIAO JINGHONG

日期：2024-06-14
Date



声明：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；2、未经本实验室书面许可，不得部分复制本报告；3、本报告仅是样品的检测结果；4、本报告所述的样品信息为委托单位自行声明，实验室不负责其真实性。
Notes: 1. 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. This report shall not be reproduced, except in full, without the prior written approval from the issuing laboratory. 3. The results in this report apply to the samples only. 4.The product information are declared by applicant, and laboratory is not responsible for the authenticity.

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 2/F, Building 18, Lanshi International Metal Exchange Center, Kuiqiyi Road, Chancheng District, Foshan, Guangdong, China 528000
Tel: 86-757-83960558 83827991 E-mail: fsiqtc@163.com

Accredited for compliance with ISO/IEC 17025 – Testing

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports

Accreditation No. 2735

WET PENDULUM SLIP RESISTANCE TEST

Karst – Stone White Matt

Prepared for:

Sample Description:	Karst – Stone White Matt
No. of Specimens & Size Supplied:	5 off, 75x230 mm, (Sampling Conducted by Client)
Specimen Preparation:	Washed with water and pH neutral detergent, rinsed then dried.
Test Condition & Slope:	Unfixed, N/A
Test Direction:	Test direction not applicable.
Air Temperature:	22°C
Test Standard:	AS 4586:2013 Slip resistance classification of new pedestrian surface materials, Appendix A - Wet Pendulum Test
Test Location:	ATTAR 44-48 Rocco Drive, Scoresby, VIC, 3179
Test Date:	21 June 2024
Test Equipment:	Munro Stanley Pendulum Skid Resistance Tester Serial Number 1221, Calibrated 09/04/2024.
Slider Rubber:	Slider 96 Batch No. #31 prepared on P400 & 3µm lapping film.
Test Personnel:	Louie Karkatzoulis

Specimen Number	**1**	**2**	**3**	**4**	**5**
Mean British Pendulum Number (BPN)	41	44	39	40	39
Slip Resistance Value (SRV)	**41**				
Classification	**P3**				

These results apply only to the specimens tested and it is recommended that before selection of flooring or paving materials the effect of service conditions, including maintenance procedures and wear on their slip resistance be checked. Where alternatives are permitted by the standard, the choice of rubber slider used may also influence the test results obtained.

Prepared By:

Louie Karkatzoulis
Compliance and Testing Technician

Reviewed By:

Dale Siegle
Technical Consultant - Compliance Services
Approved Signatory

This report may not be reproduced except in its entirety

www.attar.com.au
ABN: 14 006 554 785
Engineering Materials Evaluation Pty Ltd t/a ATTAR
44-48 Rocco Drive, Scoresby VIC 3179
Ph: 1300 139 155
E: admin@attar.com.au

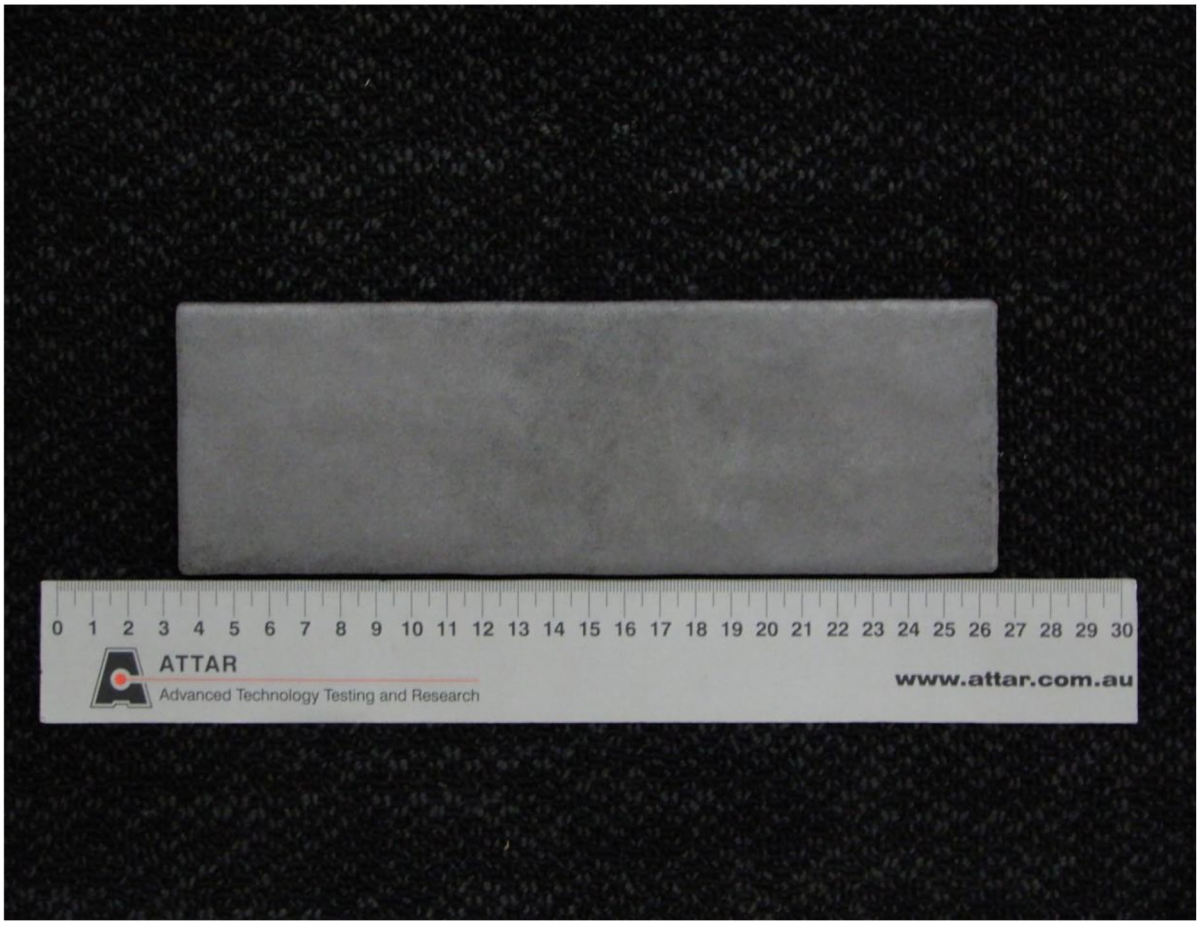


Figure 1: Karst – Stone White Matt

This report may not be reproduced except in its entirety

CLASSIFICATION CRITERIA – AS 4586 – 2013
Wet Pendulum Test - Appendix A

Slip resistance

When this Standard is used for the testing and classification of the slip resistance of carpets (or carpet-like products) in potentially wet locations, the carpet shall be tested using the wet pendulum test method set out in Appendix A of AS 4586, and shall be reported as such.

When this AS 4586 is used for the testing and classification of the slip resistance of carpets in dry locations, the test shall be carried out in the dry condition using the pendulum test method set out in Appendix A of AS 4586, modified in accordance with Paragraph A2, and shall be reported as such.

The 'dry floor friction' test method in Appendix B of AS 4586 is not suitable for heavily profiled surfaces or carpets.

Compliance

The surface shall comply with the stated classification for the test method and test rubber that is nominated and declared by the manufacturer or supplier.

TABLE 2: CLASSIFICATION OF PEDESTRIAN SURFACE MATERIALS ACCORDING TO THE AS 4586 WET PENDULUM TEST

Class	Pendulum SRV (see Note 1)	
	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	

NOTES:
1 While Slider 96 or Slider 55 rubbers may be used, the test report shall specify the rubber that was used.
2 It is expected that these surfaces will have greater slip resistance when dry.
3 SDV may be calculated by using the tables that are given in Appendix F of AS 4586, and the minimum SRV that is considered appropriate for a level surface (see examples given in Appendix F of AS 4586).

Means of demonstrating compliance

Pedestrian surfaces that are classified in accordance with Table 2 shall meet the following criteria:

(a) The mean test results shall be as follows:

(i) For the classifications in Table 2, the mean of the test results shall be—
(A) within the relevant criteria set out in the table; and
(B) each individual result shall be equal to or above the lower limit for the classification or, if below the classification, within the mean of the result minus 20%.

If either criteria is not met, the lot shall be considered to be of lower classification.

(b) The classification in accordance with Table 2 shall be determined by—

(i) selecting and testing at least five specimens at random as specified in Appendices A and B of AS 4586; or

(ii) carrying out continuous testing and process control in accordance with AS 3942.

(c) When testing individual lots, if a particular test fails to produce the expected classification it shall be permissible to—

(i) disregard the first sample, resample a minimum of 10 specimens from the whole lot, retest and apply the criteria to the new sample; or

(ii) subdivide the lot into smaller lots of different quality, resample, retest and reclassify each of the smaller lots.

Accredited for compliance with ISO/IEC 17025 – Testing

NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration and inspection reports

Accreditation No. 2735

WET PENDULUM SLIP RESISTANCE TEST

Karst – Stone White Matt

Prepared for:

Sample Description:	Karst – Stone White Matt
No. of Specimens & Size Supplied:	5 off, 150x150 mm, (Sampling Conducted by Client)
Specimen Preparation:	Washed with water and pH neutral detergent, rinsed then dried.
Test Condition & Slope:	Unfixed, N/A
Test Direction:	Test direction not applicable.
Air Temperature:	22°C
Test Standard:	AS 4586:2013 Slip resistance classification of new pedestrian surface materials, Appendix A - Wet Pendulum Test
Test Location:	ATTAR 44-48 Rocco Drive, Scoresby, VIC, 3179
Test Date:	21 June 2024
Test Equipment:	Munro Stanley Pendulum Skid Resistance Tester Serial Number 1221, Calibrated 09/04/2024.
Slider Rubber:	Slider 96 Batch No. #31 prepared on P400 & 3µm lapping film.
Test Personnel:	Louie Karkatzoulis

Specimen Number	**1**	**2**	**3**	**4**	**5**
Mean British Pendulum Number (BPN)	51	50	46	49	49
Slip Resistance Value (SRV)	**49**				
Classification	**P4**				

These results apply only to the specimens tested and it is recommended that before selection of flooring or paving materials the effect of service conditions, including maintenance procedures and wear on their slip resistance be checked. Where alternatives are permitted by the standard, the choice of rubber slider used may also influence the test results obtained.

Prepared By:

Louie Karkatzoulis
Compliance and Testing Technician

Reviewed By:

Dale Siegle
Technical Consultant - Compliance Services
Approved Signatory

This report may not be reproduced except in its entirety

www.attar.com.au
ABN: 14 006 554 785
Engineering Materials Evaluation Pty Ltd t/a ATTAR
44-48 Rocco Drive, Scoresby VIC 3179
Ph: 1300 139 155
E: admin@attar.com.au

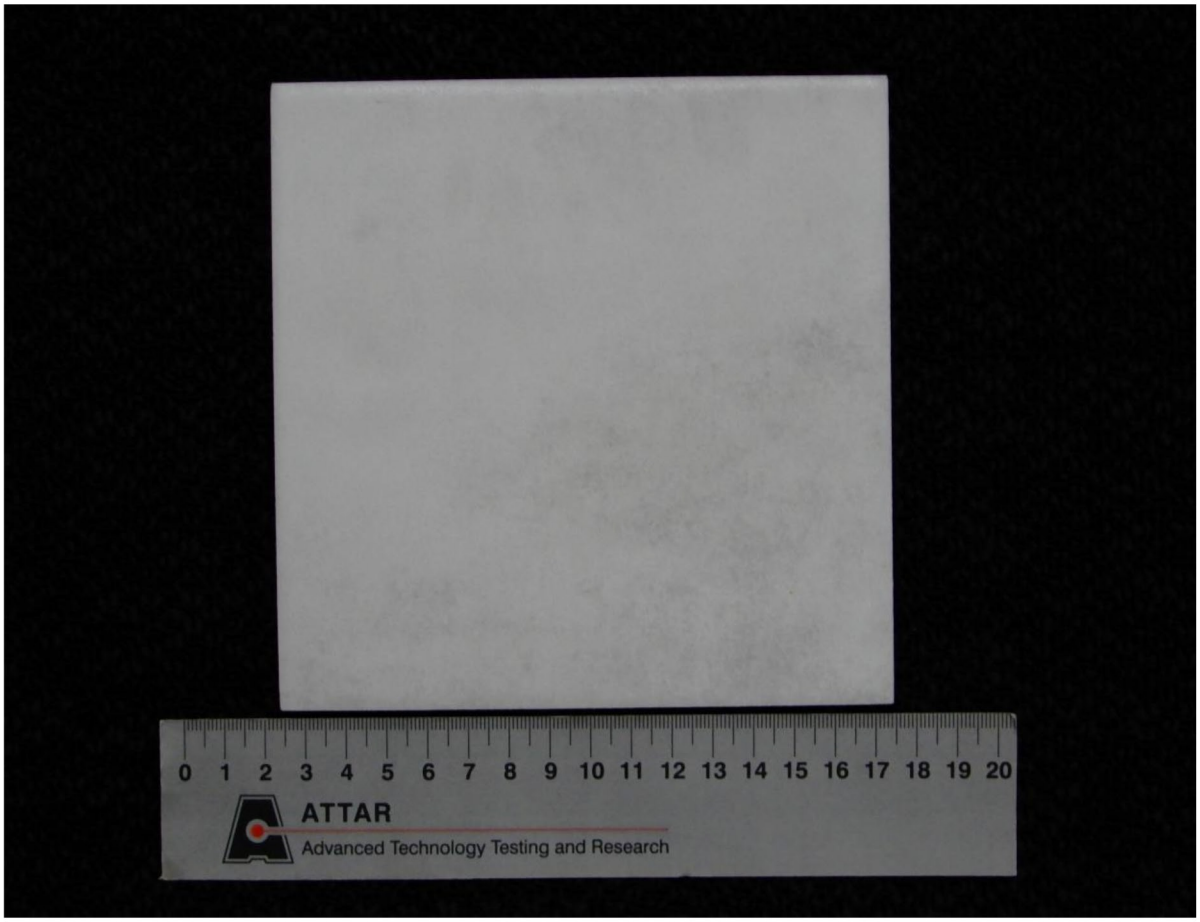


Figure 1: Karst – Stone White Matt

CLASSIFICATION CRITERIA – AS 4586 – 2013
Wet Pendulum Test - Appendix A

Slip resistance

When this Standard is used for the testing and classification of the slip resistance of carpets (or carpet-like products) in potentially wet locations, the carpet shall be tested using the wet pendulum test method set out in Appendix A of AS 4586, and shall be reported as such.

When this AS 4586 is used for the testing and classification of the slip resistance of carpets in dry locations, the test shall be carried out in the dry condition using the pendulum test method set out in Appendix A of AS 4586, modified in accordance with Paragraph A2, and shall be reported as such.

The 'dry floor friction' test method in Appendix B of AS 4586 is not suitable for heavily profiled surfaces or carpets.

Compliance

The surface shall comply with the stated classification for the test method and test rubber that is nominated and declared by the manufacturer or supplier.

TABLE 2: CLASSIFICATION OF PEDESTRIAN SURFACE MATERIALS ACCORDING TO THE AS 4586 WET PENDULUM TEST

Class	Pendulum SRV (see Note 1)	
	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	

NOTES:
1 While Slider 96 or Slider 55 rubbers may be used, the test report shall specify the rubber that was used.
2 It is expected that these surfaces will have greater slip resistance when dry.
3 SDV may be calculated by using the tables that are given in Appendix F of AS 4586, and the minimum SRV that is considered appropriate for a level surface (see examples given in Appendix F of AS 4586).

Means of demonstrating compliance

Pedestrian surfaces that are classified in accordance with Table 2 shall meet the following criteria:

(a) The mean test results shall be as follows:

(i) For the classifications in Table 2, the mean of the test results shall be—
(A) within the relevant criteria set out in the table; and
(B) each individual result shall be equal to or above the lower limit for the classification or, if below the classification, within the mean of the result minus 20%.

If either criteria is not met, the lot shall be considered to be of lower classification.

(b) The classification in accordance with Table 2 shall be determined by—

(i) selecting and testing at least five specimens at random as specified in Appendices A and B of AS 4586; or

(ii) carrying out continuous testing and process control in accordance with AS 3942.

(c) When testing individual lots, if a particular test fails to produce the expected classification it shall be permissible to—

(i) disregard the first sample, resample a minimum of 10 specimens from the whole lot, retest and apply the criteria to the new sample; or

(ii) subdivide the lot into smaller lots of different quality, resample, retest and reclassify each of the smaller lots.

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Common name:	Ceramic Tile (For purposes of this SDS, the term “ceramic” encompasses alltypes of tile products.)
Manufacturer Name:	Max Glory International Ltd
Address:	22nd~23rd Floor, South Tower, Citic Poly Plaza, TianHong Rd, LeCong Town, ShunDe District, Foshan City, Guangdong Province, P. R. China 528000 Tel: +86-757-8307 1852 or 8313 4180 - 8010 Fax: +86-757-8313 4181
Emergency Assistance:	Tel: +86-757-8307 1852 or 8313 4180 - 8010
Recommended Use:	Building Material – for floor and wall cladding

2. HAZARDS IDENTIFICATION

Tile products are odorless, stable, non-flammable, does not release any hazardous chemical and are considered as non-hazardous to health under normal conditions of use. However, dust containing crystalline silica is produced by the cutting and grinding of tiles during installation or by operations such as demolition / removal projects. Respiratory, hand and eye protection may be needed to prevent excess exposure to airborne particulates from these activities. The hazards identified below apply to tile usage under these conditions.

Signal Word:	Danger
Hazardous substance:	Crystalline Silica


Category 3 (Respiratory tract irritation) (H335)


Category 1A(Carcinogenicity) (H372)

Issued Date: 3rd September 2024

Hazard Statements:	May cause CANCER (inhalation) (H350) May cause respiratory irritation (H335) Causes damage to organs (lung/respiratory) through prolonged or repeated exposure (inhalation) (H372)
Precautionary Statements:	Do not handle until all safety precautions have been read and understood. (P202) Do not breathe dust/spray. (P260+P261) Wash skin thoroughly after handling. (P264) Do not eat, drink or smoke when using this product. (P270) Wear protective gloves, protective clothing, eye protection, faceprotection. (P280)
Potential Health Effects:	Inhalation: Do not breathe dust. See “Health Hazards” in Section 11 for more details.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures
Description: Mixture of substances listed below with non-hazardous additions

Dangerous components: Not applicable
Non-hazardous components:
Tiles consist of a mixture of predominantly clay types and other naturally occurring mineral substances. After mixing with water and pressing of the tile the bisque is fired at very high temperature. During the firing process very stable crystal grid structures are formed in which the individual chemical elements are incorporated.

Main constituents of ceramic tiles (bisque) are silicon oxide (65 – 75%) and aluminium oxide (15- 25%).

Main constituents of the glazing layer are silicon oxide (approx. 50%), aluminium oxide (approx. 10%) and calcium oxide (approx. 10%); furthermore, the glazing layer contains small percentages of the following substances: sodium oxide, manganese oxide, iron oxide, magnesium oxide, potassium oxide and barium oxide.

4. FIRST AID MEASURES

Applicable during cutting or changing the shape of the tile during installation and removal whenpotential hazards associated with dusts which may be produced.

Eyes: Immediately flush eyes with large amounts of water for at least 15 minutes if dust getsin eyes. Get medical attention if irritation persists.

Skin: Wash thoroughly after working with tiles.

Inhalation: Remove to fresh air if exposed to large amounts of tile dust. Administer artificial respiration if breathing has stopped. Keep victim at rest. Call for prompt medical attention.

Ingestion: Not applicable for intact tiles.

Have emergency eyewash station available in area where tiles are cut.

5. FIRE-FIGHTING MEASURES AND INFORMATION

Flash Point (Method Used):	Not applicable
Auto ignition Temperature:	Not applicable
Flammable Limits (% by Volume in Air):	LEL - not applicable UEL - not applicable
Fire Extinguishing Media:	None required Non-flammable
Special Fire Fighting Procedures:	None
requiredFire and Explosion Hazards:	None

6. ACCIDENTAL RELEASE MEASURES

Avoid creating excessive dust. Clean up dust with a vacuum system with a High-efficiency particulate (HEPA) air filter vacuum or damp sweeping. See Section 8 of this SDS concerning PPE information for clean-up.

7. HANDLING AND STORAGE

Handling: No specific chemical hazards when handling whole product. When cutting, grinding orhacking see Section 8 on Exposure Control.

Storage: Dry covered condition recommended. Do not store near acids. If tiles contact some acids,damage/discoloration to the surface may occur. Shelf life is unlimited.

Issued Date: 3rd September 2024

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits

OSHA PEL : 0.10 mg/m³ as respirable crystalline silica
ACGIH TLV : 0.05 mg/m³ as respirable crystalline silica

Control of occupational exposure:

Technical measures: Bring tiles to size using a score-and-cut tile cutter instead of sawing or grinding methods. During sawing or grinding of tiles or removal of old tiles, always use local exhaust ventilation combined with collection of dust, in the case of sawing or grinding, wet cutting methods are more preferable in which the sawing or grinding equipment is equipped with water supply or with application of (semi) automatic removal equipment with moistening facility.

Ventilation: Use adequate ventilation to keep exposure to dust below recommended exposure levels.Avoid inhalation of dust. The highest probability of silica exposure occurs during installation using drycutting methods or during removal of installed tile.

Respiratory Protection: Use of a properly fitted and approved particulate respirator is recommended when cutting tiles for installation or during the removal of installed tile.

Eye Protection: Use dust-proof goggles or safety glasses with side shields. Contact lenses may absorb irritants. Do not wear contact lenses in work areas.

Skin Protection: Cotton or leather work gloves should be worn when cutting this product to minimize skin exposure to dust and/or cuts. Wash hands prior to eating, drinking, or smoking, and at the end ofthe work shift, after cutting operations are conducted.

NOTE: Personal protection information in Section 8 is based on general information for normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the assistance of an industrial hygienist or other qualified professional be obtained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brittle solid; colour may vary
Odor:	Odorless
Melting Point:	Not Available (>2200 0F)
Boiling Point:	Not applicable
Vapor Pressure:	Not applicable
Vapor Density (Air = 1):	Not applicable
Solubility in Water:	Insoluble
Specific Gravity (H2) = 1):	1.6 to 2.1
Percent Volatile by Volume:	Not applicable
Evaporation Rate (Ethyl Ether = 1):	Not applicable
Viscosity:	Not applicable
Volatility:	0 g/L Volatile Organic Compounds (VOCs)

10. STABILITY AND REACTIVITY

Stability:	Stable in current form.
Conditions to Avoid:	Avoid contact with acids (e.g., acetic, hydrofluoric, etc.)
Incompatible Materials to Avoid:	Avoid contact with acids (e.g., acetic, hydrofluoric, etc.)
Hazardous Polymerization:	Will not occur.
Hazardous Decomposition Products:	None.

11. TOXICOLOGICAL INFORMATION

Acute Effects

No acute effects from exposure to intact tile are known. Working with broken or cut tile produces a potential for cuts to the hands and exposed body parts. Acute effects such as eye irritation may occur if associated with high dust operations such as dry cutting tile or during the removal of installed tile. In very rare cases, symptoms of acute silicosis, a form of silicosis may develop following acute exposureto extremely dusty environments. Signs such as labored breathing and early fatigue may indicate silicosis; however, these same symptoms can arise from many other causes.

Chronic Effects

No chronic effects are known for exposure to intact tile. Long-term, continual exposure to respirable crystalline silica at or above established permissible occupational exposure limits may lead to the development of silicosis, a nodular pulmonary fibrosis (NPF). NPFs are also associated with pulmonary tuberculosis, bronchitis, emphysema, and other airway diseases. This type of chronic exposure to silica dust may also result in the development of autoimmune disorders, chronic renal disease, and other adverse health effects.

Recent epidemiologic studies demonstrate that workers exposed to elevated silica concentrations have a significant risk of developing chronic silicosis. Signs such as labored breathing and early fatigue may indicate silicosis; however, these same symptoms can also arise from many other causes.

Potential Adverse Interactions

Silicosis may be complicated by severe mycobacterial or fungal infections and result in tuberculosis (TB). Epidemiologic studies have established that silicosis is a risk factor for developing TB. Any existing respiratory or pulmonary diseases may be complicated by exposure to respirable crystalline silica. Smoking may increase the risk of adverse effects if done in conjunction with occupational exposure to silica dust at or above permissible exposure limits.

Carcinogen Status

Respirable crystalline silica is classified by the International Agency for Research on Cancer (IRAC) as a Group I Carcinogen (carcinogenic to humans).

Overview of Animal Testing

Short term experimental studies of rats have found that intratracheal instillation of quartz particles leads to the formation of discrete silicotic nodules in rats, mice and hamsters.

Oral (silica) Lethality

LD50 Rat oral >22,500 mg/kg
LD50 Mouse oral >15,000 mg/kg
LC50 Carp >10,000 mg/l (per 72 hr.)

12. ECOLOGICAL INFORMATION

There are no known hazardous decomposition products.
Persistence and degradability : Not biodegradable
Aquatic toxicity : Not known

13. DISPOSAL CONSIDERATIONS

Under normal conditions these products are not considered hazardous waste and do not release hazardous materials after installation. Dispose in accordance with Federal, state and local waste disposal regulations

14. TRANSPORTATION INFORMATION

D.O.T Shipping Name:	Not applicable
Hazard Class:	Non-regulated (For disposal purposes material is non-hazardous Class III regulated material)
ID Number:	Not applicable
Marking:	Not applicable
Label:	None
Placard:	None
Hazardous Substance/RQ:	Not applicable
Shipping Description:	Porcelain/Ceramic
TilesPackaging References:	None

15. REGULATORY INFORMATION

Refer to the regulatory exposure limits for dust released during cutting, grinding or removal. (See Item 8).

Note: The information in this data sheet provides information related to the potential hazards associated with dusts which may be produced during cutting or otherwise changing the shape of the tile during installation and/or removal.

16. ADDITIONAL INFORMATION

Global Harmonization Identification System
GHIS: Health: 3 Fire: 4 Reactivity: 4

Hazardous Material Identification System
HMIS: Health: 1 Fire: 0 Reactivity: 0

Issued Date: 3rd September 2024

The information given is to the best of Max Glory International Ltd's knowledge and is believed to be correct as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. This shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. It is the user's responsibility to satisfy itself as to the suitability and completeness of such information for their own particular use.

Please take note of the following additional safety measures when installing or processing tiles:

- Wear adequate working clothes
- Wear knee protection
- Wear safety shoes
- Use appropriate lifting and transporting equipment

Issued Date: 3rd September 2024