

O&M Manual

Exterior floor tile installation of our standard range of geometric floor tiles.

Technical Information and details

Unlike other pre-moulded tiles these have square edges and can be closely butted to recreate an accurate and authentic look. Original period tiled floors were based on the Imperial measurement system. All of the geometric components featured in this range of tiles are based on metric measurements. We do not recommend the use of this range for restoration purposes, as it has been designed solely with new installations in mind. However, it is possible to cut the shapes required from the larger 150mm square tiles that we supply.

Apart from a very subtle difference in size and colour, this range, as far as we are aware, is the closest to the original system of dust pressed pre moulded tiles. The tiles are unglazed fully vitrified (heat treated) ceramic.

Range and Classification Standards

Floors of premises are classified in terms of the increasing levels of resistance and durability to the loads they carry and the ability to withstand wear and tear due to: Surface abrasion, damage from static or moving loads, water used for cleaning or from products and chemicals which are corrosive or stain.

Tiles are tested in order to determine their resistance to these factors and are classified in line with NF standards (French Norms). All our tiles conform to the NFP 61-405 standards (class B1 of the European EN176 standards). They comply with classifications U4, P4, E3 and C2 with the exception of the 20mm x 20mm, 50mm x 50mm and the relief design tiles which comply with P3). Our tiles, with their increased thickness (9mm), comply with the P45 standards.

Characteristics Features	Required Standards	Results
Surface resistance	> 6	7
Resistance to acid / alkali	No reaction to solutions weight variation under 1%	No reaction to solutions weight variation under 0.2%
Water absorption	< 0.6%	0.1% to 0.5%
Frost resistance	No damage after tests in freezing and defrosting (+20 centigrade to -15 centigrade)	Conforms to standards
Heat resistance	No change	Conforms to standards
Flexural strength	Able to withstand 250 kgf/cm ²	Able to withstand between 380 and 450 kgf/cm ²
Resistance to deep scratches	< 29mm	24mm
Dent resistance	No denting	Conforms to standards
Crush resistance	1500 kgf/cm ²	Between 3200 and 5550 kgf/cm ²

In tests, results for all our products exceed the required industry standards.

Full vitrification of our tiles ensures they have a long life. Our products are durable, resistant and easily maintained. The tiles are resistant to scratches from foot traffic and machinery passing over them. Our tiles maintain their original colour for many years and when adapted for industrial use, they are capable of heavy wear. With a very low porosity they can be used in all conditions, inside and out, on floors or walls and are equally suitable for dry and humid conditions.

Slip Resistance

Report

CSIRO - Building Construction and Engineering
CERLABS European Network of National Ceramic Laboratories - Australian Member

Manufacturer: Winckelmans

Tile Description: 50mm x 50mm smooth grey unglazed dry pressed ceramic tile

Determination of Slip Resistance using Pendulum Friction Tester

Test carried out in accordance with AS/NZS 3661.1:1993

Slip resistance of pedestrian surfaces, Part 1: Requirements.

Appendix A. (Wet Slip)

Test Date: 5 January 1998

Results

Location: Ceramic Tile Laboratory

Sample: Unfixed

Cleaning: Acetone

Temperature: 23 centigrade

Rubber Type: S4

Pendulum Tester

Specimen	1	2	3	4	5
	55	57	54	57	57
Last 3 swings	55	57	54	57	57
	54	58	54	57	57
Averages	55	57	54	57	57
Conversion to coefficient friction	0.60	0.63	0.59	0.63	0.63

Mean coefficient of friction: 0.62

The compliance requirement is not less than: 0.40

and no specimen in that sample shall be less than: 0.35

Surface Roughness (R_{tm}) mean: 30.3 microns

According to the UK Slip Resistance Group, a R_{tm} roughness value of at least 10 microns is needed in wet conditions, and it has elsewhere been suggested that at least 14 microns is required for ceramic, terrazzo and stone flooring.

DIN 51130 RValue slipperiness classification

Classification	R9	R10	R11	R12	R13
Slip Angle (°)	6 - 10	10 - 19	19 - 27	27 - 35	> 35

In HSE Ramp Tests, our range of tiles comply with R10 specifications.

Aftercare and Maintenance of a New Exterior Victorian Floor Tile installation

It is the manufacturer's recommendation that this range of tiles is not to be sealed in exterior locations. This will affect the frost proofing of the material and as such may make the tiles more prone to damage.

Ongoing cleaning & Maintenance of tiled surfaces

Any soiling or staining should be cleaned immediately with warm water. To remove stubborn dirt or staining we would recommend a tile cleaning product for external use such as a mild acid solution or strong Alkali detergent. Both products are normally diluted before use. Please ensure that when using acid based products that there are no other materials in the vicinity that would be prone to damage such as Marble or Granite step treads or risers. If using an acid based product is not suitable then an Alkali detergent or neutral cleaner such as Vulcaseal DC135.

As a general rule, an exterior tiled area receiving medium to high traffic should be brushed free of dust and organic matter and washed down at least once a week. If any gaps appear in the grouting over time then these should be filled by topping up the grout to prevent any water penetration.

Ongoing cleaning & Maintenance of external Granite or Marble surfaces

The intensive cleaning of a natural stone product requires specific cleaners that are compatible with the respective material. Otherwise just warm water should be used. It is important that no abrasive pads should be used on such surfaces. Light marks can be removed from granite with a fine wire wool. This is not the case with marble.