Technical Data Sheet

Product Category	**Permeable**
Product name	**Permeable Paver**
Material	**Recycled Porcelain**
Finish	**Textured**
Colour Options	**off white, light grey, dark grey**

Urban Paving's Permeable Paver with a textured finish are expertly crafted to combine aesthetic appeal with superior functionality for any outdoor space. Manufactured from high-quality inorganic materials, including 93% recycled porcelain and sintered at a temperature of 1200°C, these pavers boast an impressive compressive strength exceeding 50 MPa, ensuring long-lasting durability. The textured finish provides a sleek, contemporary look, making them perfect for residential patios, walkways, and light traffic areas. Additionally, these pavers are weather and frost-resistant, having passed rigorous testing under conditions of ±25°C for 50 cycles without any signs of rupture, peeling, or cracking.

Size (mm)	Thickness (mm)	Number per m²	Weight per Paver (kg)	Number per Pallet	Weight per Pallet (kg) *excludes pallet weight
600 x 600	55	2.56	40.30	24	967.2
600 x 300	55	5.03	18.00	72	1296
600 x 200	55	7.45	12.00	120	1440
600 x 150	55	9.83	9.00	168	1512
500 x 500	55	3.79	27.50	36	990
400 x 400	55	6.25	16.10	80	1288
400 x 200	55	12.13	8.00	160	1280
450 x 300	55	7.13	13.50	96	1296
300 x 300	55	11.11	9.00	144	1296
300 x 150	55	21.95	4.55	324	1474.2
200 x 200	55	25.64	3.90	360	1404
200 x 100	55	49.36	1.95	700	1365

Imported from China.

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Relevant Building Code Clauses

B1 Structure - B1.3.1 - Urban Paving Permeable Pavers are all made with recycled, and kiln fired porcelain and meet or exceed NZS 4456.5:2003 for breaking load and Modulus of Rupture.

B2 Durability - B2.3.1 - Urban Paving Permeable Pavers have durability of 10 years when laid and installed correctly.

D1 – Assess Routes - D 1.3.3(d) Urban Paving Permeable Pavers are manufactured with a slip resistance classification minimum of W, as required by NZS 3116 when tested to AS/NZS 4586.

E1 - Surface Water - E1.3.1: Urban Paving Permeable Pavers allow water to infiltrate through the surface, reducing runoff and helping to manage surface water effectively on-site.

> **E1.3.2**: The permeable nature of the pavers helps to manage stormwater by allowing it to infiltrate into the ground rather than accumulate on the surface.
>
> **E1.3.3**: Urban Paving Permeable Pavers contribute to this requirement by facilitating the dispersion and absorption of water into the ground, thus reducing the potential for flooding or water damage.

E2 - External Moisture - E2.3.6: Urban Paving Permeable Pavers aid in controlling water flow by allowing it to seep into the subsoil, thereby preventing water from pooling on the surface or seeping into building foundations.

F2- Hazardous materials - F2.3.1 Urban Paving Permeable Pavers are free from hazardous materials and safe for use in building projects.

Compliance

	Test Standard	Result
Breaking Load KN (200 x100)	AS/NZS 4456.5:2003	**8.9**
Breaking Load per 100mm KN		**5.4**
Modulus of Rupture MPa (min)		**5.3**
Coefficient of friction (COF)	AS 4586:2013	**0.6 V**
Slip Resistance Classification of New Pedestrian Surfaces		**60**
		P5

V ≥ 54 high slip resistance **X** 35-44 low slip resistance **Z** ≤25 Extremely low slip resistance

W 45-54 moderate slip resistance **Y** 25-34 very low slip resistance

Technical Parameters

	Test Standard	Standard	Notes
Compressive Strength	AS/NZS 4456.4:2003	>4MPa	5.4 MPa tested to GBT25995-2010
Water Absorption:	AS/NZS 4456.14:2003	N/A	Not tested, 11l /m^2
Density	AS/NZS 4456.8:2003		Estimated 2930kg/m^3
Frost Resistance	ASTM C1262		Based on product as being sintered at 1200°C and having passed 50 cycles of frost resistance testing at ±25°C, it is reasonable to expect that the pavers would meet or exceed the ASTM C1262 requirements for frost resistance.
Dimensional Tolerance	AS/NZS 4456.2:2003	+/- 2mm	+/- 2mm
Infiltration rate	GB/T 25993-2010 *	N/A	600mm/h per m2 of paver area

*This test method is more comprehensive and considers the dynamic viscosity of water at different temperatures, making it more suitable for conditions where temperature fluctuations are expected compared to NZS

Limitations

Urban Paving Permeable Pavers are designed for foot traffic up to medium vehicular traffic (<10t).

Design requirements

Pavements should be designed in consultation with a qualified civil engineer and within the guidelines of NZS3116:2002. For small projects refer to our Installation guide here.

Permeable Paver Care and Handling

- Do not leave objects or tools on new pavers overnight to avoid shadow marks.
- Store uncovered pallets of pavers in a dry, protected place to avoid water marks.
- If moving pavers from the pallet, restack them as originally placed; avoid diamond or flat stacking to prevent surface shadows.
- When installing from multiple pallets, mix pavers as they are laid to accommodate colour variations and natural appearance.
- Efflorescence is unlikely due to the paver composition. If efflorescence does occur, it is more likely due to environmental factors, such as water movement through salt-containing materials in the sub-base or joint fill, rather than the paver material itself. Ensure proper drainage and select clean, low-salt materials for bedding and jointing and regular maintenance to prevent water pooling.
- Efflorescence is a natural phenomenon where salts migrate to the surface, causing a whitish discoloration, which will settle over time. See further information here
- Permeable Pavers are porous and can absorb stains, so promptly remove any staining materials.
- Pre-sealing pavers can help reduce colour fading, staining, and fungal growth, enhancing the colour and slowing weathering.
- Be aware that sealing enhances the current colour and variation, "locking in" the appearance.
- Sealing may affect surface slip resistance and permeability. Please consult with the supplier.

This technical data sheet provides typical properties and characteristics; actual performance may vary based on specific conditions and installation practices.