

CLASS 1

BUILDING PRODUCT INFORMATION SHEET



PRODUCT NAME: AQUAPAVE® PERMEABLE CONCRETE

OTHER PRODUCT NAMES: AQUAPAVE®

PRODUCT DESCRIPTION AND INTENDED USE:

AquaPave Permeable Concrete is a durable pavement with a large volume (approximately 20%) of interconnected voids, which allows water to pass through it while retaining the strength to withstand vehicular traffic. Like conventional concrete, it's made from a mixture of cement, coarse aggregates, and water. However, it contains little or no sand, which results in an open-cell structure.

RECOMMENDED ACI AND ASTM STANDARDS & TEST METHODS:

ACI 522.1-13: Specification for Pervious Concrete Pavement

ASTM C1688: Standard Test Method for Density and Void Content of Freshly Mixed Pervious Concrete

ASTM C1701: Standard Test Method for Infiltration Rate of In-Place Pervious Concrete

ASTM C1747: Standard Test Method for Determining Potential Resistance to Degradation of Pervious Concrete by Impact and Abrasion

ASTM C1754: Density and Void Content of Hardened Pervious Concrete

Product Identifier	AquaPave
Place of Manufacture	New Zealand
Legal and Trading Name	AquaPave Permeable Concrete
Address for Service	38 Malta Crescent, South New Brighton, Christchurch
Website	www.aquapave.co.nz
Email Address	info@aquapave.co.nz
Phone Number	022 425 4906
NZBN	9429047460669

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RELEVANT BUILDING CODE

All approved partner Ready Mixed Concrete Batch Plants that manufacture AquaPave Permeable Concrete are subject to annual audit by the Concrete NZ Plant Audit Scheme to determine compliance with NZS 3104, which is referenced in various standards that contribute to complying with the Building Code, and they are tested using the methods of NZS 3112: Part 2. Current Audit Certificates are available on request.

With appropriate design and installation by NRMCA Certified Pervious Concrete Contractors following the **AquaPave Permeable Concrete Specification**, AquaPave Permeable Concrete can demonstrate compliance with the following Building Code clauses:

B1 – Structure: Work shall generally be in accordance with the requirements of ACI 522.1 “Specification for Pervious Concrete Pavement” published by the American Concrete Institute. Compliance of AquaPave Permeable Concrete is determined based on its density relative to the approved mix as determined by ASTM C1688, with a void content of 17-23% as determined by ASTM C1754. There are no standardized procedures to make and test strength specimens of permeable concrete, and the methods for conventional concrete do not apply. It is, therefore, inappropriate to specify compressive strength requirements for permeable concrete or to use such tests as a basis of acceptance.

B2 - Durability: Concrete placement, on-site control, and curing shall be conducted by an NRMCA Certified Pervious Concrete Contractor utilising good trade practice. Durable mix design shall be confirmed via ASTM C1747 impact abrasion test, where permeable concrete exhibits a cumulative impact abrasion rate reaching 60%.

D1 - Access Routes: AquaPave Permeable Concrete complies with New Zealand SLIP STANDARD AS/NZS 4586 for Slip Resistance (rating of P5).

E1 - Surface Water: AquaPave meets the specification to ensure drainage systems are in place for the disposal of surface water using gravity where possible, and to avoid blockages and leakage. Compliance is determined by achieving ASTM C1701 infiltration rate of at least 8,900 millimeters per hour.

F2 - Hazardous Building Materials: AquaPave Permeable Concrete complies with the requirements of section F2.3.1 of the NZBCS.

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LIMITATIONS ON THE USE OF THIS BUILDING PRODUCT

Damage or defects attributable to inadequate design are mitigated by the use of National Pervious Concrete Pavement Association approved cross sections for subgrade CBR over 5, with specific custom pavement design by a Chartered Professional Engineer for subgrade below 5 CBR. Ravelling due to incorrect installation is mitigated by installation supervision by an NRMCA Certified Pervious Concrete Contractor and the mandatory use of curing membrane compounds. Defect or failure of other products, efflorescence, chipping, cracking, colour variation, settlement, or use of coatings not approved for use with AquaPave Permeable Concrete are outside of our control and would not be considered an AquaPave product defect.

DESIGN REQUIREMENTS THAT WOULD SUPPORT THE USE OF THIS BUILDING PRODUCT

To ensure compliance with the New Zealand Building Code, a suitably qualified person familiar with the United States National Ready Mixed Concrete Association Pervious Concrete Installation Standards, the American Concrete Institute 522.1-13: Specification for Pervious Concrete Pavement, and the requirements of the New Zealand Building Code should review and define the requirements for the use of permeable concrete.

INSTALLATION & MAINTENANCE REQUIREMENTS

To ensure compliance with the New Zealand Building Code, installation should only be conducted by United States National Ready Mixed Concrete Association Certified Pervious Concrete Contractors and good trade practice shall be utilised for construction. AquaPave Permeable Concrete shall be maintained by regular inspection and cleaning as per the **AquaPave Permeable Concrete Maintenance Manual**.

IS THE BUILDING PRODUCT / BUILDING PRODUCT LINE SUBJECT TO WARNING OR BAN UNDER SECTION 26

No / Not Applicable