

BIO-AQUIFER STORM SYSTEM

Specifications for Construction

PART 2 – PRODUCTS

2.01 ECOLOGICAL PERMEABLE PAVERS – Aqua-Bric Type 1, Aqua-Bric Type 4, Aqua-Bricloc

A. All interlocking paving stones shall comply with the quality specifications for solid concrete interlocking paving units as required per ASTM C 936.

1. ADA Compliance: Paver shall be ADA compliant, having joint and void separation not to exceed 13 mm.
2. Chamfer: Approved paver shall have 2 mm chamfer. Top of chamfer to top of chamfer measurement on adjacent paver not to exceed 15 mm.
3. Void Ratio: Paver shall contain void opening minimum of 5% void ratio.
4. Portland cement: Conform to ASTM C 150.
5. Aggregates: Conform to ASTM C 33 for normal weight concrete aggregate (no expanded shale or lightweight aggregate) except that grading requirements shall not necessarily apply.
6. Water: Clean and free from any deleterious matter.
7. Other Constituents: Air-entraining admixtures, integral water repellents and finely ground silica shall have a proven record of performance and shall conform to the applicable and corresponding ASTM standards.
8. Compressive Strength: At the time of delivery to the work site, the average compressive strength of the pavers shall not be less than 8,000 psi, with no individual unit less than 7,200 psi. Testing procedures shall be in accordance with ASTM C 140 specifications.
9. Absorption: The average absorption shall not be greater than five percent (5%), with no individual unit result greater than seven percent (7%) per ASTM C 140 specifications.

10. Resistance to Freezing and Thawing: The manufacturer shall satisfy the purchaser by laboratory testing that the paving units have adequate resistance to freezing and thawing per ASTM C 67-83 specifications. The specimens shall have no breakage and not greater than one percent (1%) loss in dry weight of any individual unit when subjected to 50 cycles of freezing and thawing.
11. Dimensional Tolerances: Pavers shall be prismatic in plan and formed with straight, uniform edges. The tolerance for the flat portions of the sides shall not exceed 1/32" as measured with a steel straight edge. "Slumped" pavers exceeding this tolerance will be rejected. The length, width and thickness of the paving stones shall meet the allowable tolerances specified in ASTM C 936.
12. Color: Monochromatic colors from standard range of colors and/or natural gray.
13. Mold Life: No paver shall be used for this project which has been manufactured in a mold that exceeds the mold life specified in the Method Statement, without written approval of the installer and owner.
14. Mold Measurement: The measurement across a cluster for any mold shall not increase more than 1/2" for the entirety of the use of the mold for this project.
15. Deicer: The use of deicer on the pavers shall not void the manufacturer's warranty.

2.02 VISUAL INSPECTION

All units shall be sound and free of defects that would interfere with the proper placing of the unit or impair the strength or permanence of the construction. Minor cracks incidental to the usual methods of manufacture, or minor chipping resulting from customary methods of handling in shipment, delivery and installation, shall not be deemed grounds for rejection.

2.03 AGGREGATE MATERIALS

A. Bedding Course Aggregate

The bedding course and void filler aggregate shall be free of organics and soluble salts, or other contaminants likely to cause efflorescence. The grading requirement shall be in compliance with the following gradation chart. This material will be crusher run and washed.

<u>ASTM Sieve Size</u>	<u>Percent Passing (by weight)</u>
1/2 inch	100 – 100
3/8 inch	94 – 100
¼ inch	39 – 94
No. 4	23 – 39
No. 8	8 – 23
No. 16	0 - 8

B. Base Course Aggregate:

The base course aggregate shall consist of open-graded stone and meet the following gradation chart. This material will be crusher run and washed.

<u>ASTM Sieve Size</u>	<u>Percent Passing (by weight)</u>
1-1/2 inch	100 – 100
1 inch	90 – 100
3/4 inch	48 – 90
½ inch	27 – 48
¼ inch	12 – 27
No. 4	0 - 12

C. Sub-Base Course Aggregate:

The sub-base course aggregate shall consist of open-graded stone and meet the following gradation chart. This material will be crusher run.

<u>ASTM Sieve Size</u>	<u>Percent Passing (by weight)</u>
4 inch	100 – 100

3 inch	80 – 100
2-1/2 inch	50 – 80
2 inch	20 – 50
1-1/2 inch	5 - 20
1 inch	0 – 5

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