

APPENDIX A

PREFABRICATED BAND DRAIN INFORMATION

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Specifications for Prefabricated Vertical Band Drain

Component	Property	Test Method	Requirements
Prefabricated Band Drains	Width	-	100 mm \pm 5 mm
	Discharge capacity q_w under straight condition of flow (for confining pressure at 240 kPa and hydraulic gradient at 0.5)	ASTM D4716-87 (See Note 2)	$> 55 \times 10^{-6} \text{ m}^3/\text{s}$
	Tensile strength	ASTM D4632-91 (See Notes 3 and 4)	$> 1,000 \text{ N}$
	Elongations at 1 kN	ASTM D4632-91	$< 10\%$
Filter	Apparent opening size (AOS = O_{95})	ASTM D4751-93	$< 90 \mu\text{m}$
	Permittivity	ASTM D4491-92	$> 0.2 \text{ s}^{-1}$

Notes:

- (1) All testing methods refer to American Society for Testing and Materials (ASTM).
- (2) (a) $q_w = q_i / i$ where q_i is the flow rate at hydraulic gradient i .
 (b) Soft neoprene should be used to simulate soft clays.
 (c) De-aired water should be used in the test.
- (3) None of the following items shall break before reaching the stipulated tensile strength.
 - Drain core.
 - Drain filter fabric.
 - Seam of the filter fabric.
- (4) The ASTM D4632-91 Test shall be carried out using full width jaws on full width of prefabricated vertical band drains.
- (5) Frequency of quality control test shall be one test for 50,000 m length of drain installed.

List of ASTM Standards

- D4491-92: Standard Test Methods for Water Permeability of Geotextiles by Permittivity
- D4632-91: Standard Test Method for Breaking Load and Elongation of Geotextiles (Grab Method)
- D4716-87: Standard Test Method for Constant Head Hydraulic Transmissivity (In-Plane Flow) of Geotextiles and Geotextile Related Products
- D4571-93: Standard Test Method for Determining Apparent Opening Size of a Geotextile