Australian Standard™

Geotextiles—Methods of test

Method 10.1: Determination of transmissivity—Radial method

1 SCOPE

The Standard sets out the method for determining the transmissivity of geotextiles by measuring the rate of flow of water in the plane of the fabric under a constant head using a radial flow apparatus.*

NOTES:

1 Transmissivity is the preferred measure of the in-plane water flow capacity of a geotextile.

2 This method may have limitations for materials where the transmissivity varies with direction of flow.

3 The transmissivity of the fabric varies with other contact surfaces, compressive stress and hydraulic gradient.

2 APPLICATION

This Method is applicable to non-woven or composite geotextiles. It is not applicable to high-flow capacity geocomposite sheet drains.

3 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
3704	Geotextiles—Glossary of terms
3706	Geotextiles—Methods of test
3706.1	Method 1: General requirements, sampling, conditioning, basic physical properties and statistical analysis
RILEM	
SM-10	Synthetic membranes—Geotextiles. Transmissivity

4 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 3704 apply.

5 PRINCIPLE

The flow of water through a single layer of geotextile under hydraulic load is measured.

NOTE: The determination of the transmissivity (θ) is based on Darcy's law. This means that θ is only a constant for a particular material of given thickness and confining pressure if laminar flow conditions exist, which is likely for most geotechnical applications taking advantage of the in-plane drainage capacity of geotextiles.

* This method is based on RILEM SM–10, *Transmissivity*.