

Australian Standard[®]

AS 3706.10.1—2012

Geotextiles—Methods of test

Method 10.1: Determination of transmissivity— Radial method

1 SCOPE

This 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

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| 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

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| SM-10 | Synthetic membranes—Geotextiles. Transmittivity |
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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, *Synthetic membranes—Geotextiles. Transmittivity*.