

Australian Standard®

Geotextiles—Methods of test

Method 12: Determination of durability— Resistance to degradation by hydrocarbons or chemical reagents

1 SCOPE. The Standard sets out the method for determining the durability of geotextiles when subject to testing by hydrocarbons or chemical reagents.

2 APPLICATION. This method is applicable to all geotextiles.

3 REFERENCED DOCUMENTS. The documents below are referred to in this Standard:

AS	
2193	Method of calibration and grading of force-measuring systems of testing machines
2508	Safe storage and handling information cards for hazardous materials
2508.3.009	Hydrocarbon solvents
3704	Geotextiles—Glossary of terms
3706	Geotextiles—Methods of test
3706.1	Method 1: General requirements, sampling, conditioning and basic physical properties, and statistical analysis

4 PRINCIPLE. Specimens are exposed by immersion to hydrocarbons or chemical reagents under specific conditions. The durability is assessed by comparing the ultimate force and the elongation at ultimate force of exposed specimens with that of unexposed specimens.

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

6 APPARATUS. The following apparatus is required:

- (a) Constant-rate-of-extension (CRE) tensile testing machine complying with the requirements for a Grade B machine in accordance with AS 2193, and having an extension rate of 100 mm/min.

The machine should have an autographic recorder with adequate pen response or an interfaced computer to properly record the force/elongation curve.

For machines with no autographic recorder, appropriate measuring instruments are required to allow readings of the applied force and the corresponding elongation at a number of points up to failure.

- (b) Bath, not affected by the specified reagent, maintained at a constant, specified temperature and of sufficient size to hold at least the central 100 mm length of each specimen.
- (c) Specified reagent sufficient to maintain the specified immersion of the specimens in the bath.

7 REAGENTS.

NOTE: Hydrocarbons and chemical reagents other than those listed below may be used subject to agreement between the parties to the test.