Australian Standard™

AS 4046.9

Methods of testing roof tiles

Method 9: Determination of dynamic weather resistance

1 SCOPE

This Standard sets out a method to assess the weather resistance of the body of a properly fixed tiled roof.

NOTES:

1 The wind speed and rate of water application used for the dynamic weather resistance test are not claimed to represent actual conditions during rain storms. They have been arbitrarily chosen and found to give results that correlate reasonably with the observed performance of roofs on low-rise buildings, e.g., up to 10 m.

2 The test has evolved from original studies carried out for the Standards Association of Australia by the then Commonwealth Experimental Building Station with facilities later becoming part of the CSIRO DBCE at North Ryde. The test is not absolute but comparative so that the acceptance criteria can accommodate the performance characteristics of different tile designs. The selection of standard Marseille tiles for the control specimen conforms to the philosophy of the original experimental studies, in which the performance of such imported tiles was recognized by the industry as a satisfactory benchmark. The use of imported tiles also avoided any sensitive comparison between the products of competing local manufacturers. It is recognized that a fully reproducible cladding is preferable as the datum and development of this is under ongoing review.

3 Where sarking and specific fixings are required, these should be included in the test specimen.

2 PRINCIPLE

Rain is simulated by blowing waterspray on to the specimen and assessing the penetration as compared to a control specimen.

3 REFERENCED DOCUMENT

The following document is referred to in this Standard:

AS
2049 Roof tiles

4 APPARATUS

The following equipment is required:

(a) *Wind generator* A wind generator capable of producing a windstream of 16 m/s that varies not more than ±2 m/s over the area of the discharge duct. The discharge duct is square with 1.2 m sides.