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Australian Standard®

Terra cotta roofing tiles

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The following interests are represented on Committee BD/8:

Australian Uniform Building Regulations Coordinating Council
Confederation of Australian Industry
CSIRO, Division of Building, Construction and Engineering
Housing Industry Association Australia
Master Builders Construction and Housing Association Australia
Municipal Association of Victoria
Public Works Department, N.S.W.
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Australian Standard®

Terra cotta roofing tiles

For history before 1989, see Preface.
Second edition, 1989.

PREFACE

This Standard was prepared by the Standards Australia Committee on Terra Cotta Roofing Tiles to supersede AS 2049—1977, *Terra cotta roofing tiles*.

This edition includes additional tests for squareness, water absorption and resistance to freeze/thaw of the tiles. The material has also been re-arranged to facilitate the use of integral and non-integral appendices for performance testing and illustration of components.

AS 2049 was first issued as AS A13 in 1933. AS A13 was revised in 1950, 1963, and again in 1977, when it was issued as AS 2049.

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STANDARDS AUSTRALIA

Australian Standard
Terra cotta roofing tiles

1 SCOPE. This Specification applies to terra cotta roofing tiles and to their associated terra cotta accessories. It establishes minimum standards for—

- (a) performance, fit and finish;
- (b) quality of materials; and
- (c) the finished product.

The following types of roofing tile are considered, other types are not precluded:

- (i) Shingle (plain) tiles.
- (ii) Side-locking tiles.
- (iii) Head-and-side-locking tiles.

NOTE: Appendices A and B illustrate various terms used in this Standard.

2 REFERENCED DOCUMENTS. The following documents are referred to in this Standard:

AS

1170 SAA Loading Code
1170.2 Part 2: Wind forces

2193 Methods for calibration and grading of force-measuring systems of testing machines

2050 Fixing of roofing tiles

BS

6920 Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water

3 DEFINITIONS. For the purpose of this Standard the definitions below apply.

3.1 Terra cotta—a material fired to a temperature at which a satisfactory ceramic bond is achieved.

3.2 Accessory—a moulded terra cotta product used to finish the roof, including apex, ridge and barge tiles.

3.3 Roof tile—a moulded terra cotta product used to form the field of the roof.

3.4 Identifiable lot—a batch of terra cotta tiles or accessories of the same type, profile and colour, produced in a single shift, on a particular date and at essentially the same time.

4 MATERIALS. Materials used for the surface treatment of tiles shall not impart to rainwater which may be collected from the roof, any objectionable taste, colour or odour of any element or chemical in a concentration known to be hazardous to health.

NOTE: A method of assessing Clause 4 is provided by BS 6920.

5 DESIGN AND DIMENSIONS.

5.1 General. Terra cotta roofing tiles shall be designed and manufactured to ensure that, when fixed in accordance with AS 2050, the requirements of the Dynamic Weather Resistance Test, detailed in AS 2050, are satisfied.

5.2 Dimensional tolerances. The dimensional

tolerances of terra cotta roofing tiles shall be as follows:

- (a) Width Manufacturer's nominated width $\pm 2\%$.
- (b) Length Manufacturer's nominated length $\pm 2\%$.

5.3 Distortion of tiles. The permitted distortion of any tile shall be such that when tested in accordance with Appendix C, the maximum gap shall not exceed 3 mm for plain tiles, 5 mm for side-locking tiles, and 8 mm for head-and-side-locking tiles.

5.4 Batten lugs and squareness. Where the design of the tile requires batten lugs, one or more shall be provided on the underside of each tile so that they engage over the upper edge of the tiling battens to provide for the horizontal alignment and vertical restraint of tiles when fixed.

When tiles are tested in accordance with Appendix D, the shape and position of the batten lugs where fitted, shall be such that—

- (a) where required, each of the twelve test specimens is self-supporting; and
- (b) the difference between the distances of the top and bottom corners of the specimen to either adjacent side of the stand is not more than 1.5% of the nominated overall length of the tile.

NOTE: Some single profile tile designs do not permit batten lugs to support the tile without additional restraint, e.g. multiple nailing. This test is then inappropriate for testing the truth of support. To permit the tile to be tested for squareness, the apparatus should then be used horizontally.

5.5 Ribs. Any lateral rib or ribs, incorporated in the underside of the tile body designed to restrict water penetration through laps of tiles in the finished roof may be load bearing, and therefore contoured to the tile below.

6 WORKMANSHIP AND FINISH. The surface of the tiles shall be free from defects, irregularities or excrescences which would detract from the function of the completed roof as described in Clause 5.1.

NOTES:

- 1. Some minor surface marks and blemishes are inherent in the manufacturing process.
- 2. Because of possible variations in decorative features such as colour, gloss level and texture, it is recommended that a note be included in the manufacturer's literature advising the consumer accordingly, and recommending that agreement be reached on acceptable variations in these features at the time of purchase.

7 PROVISION FOR FIXING. All terra cotta roofing tiles and terra cotta accessories shall be capable of being fixed in accordance with AS 2050 and have a fixing system designed to meet the appropriate loading requirements of AS 1170.2, as specified by the manufacturer.