



TECHNICAL REPORT

**Determination
of the resistance
to sliding**

TR 009
Edition May 2004

Technical Report 009 revised

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Foreword

EOTA Technical Reports are developed as supporting reference documents to European Technical Approval Guidelines and can also be applicable to a Common Understanding of Assessment Procedures, an EOTA Comprehension Document or an European Technical Approval, as far as reference is made therein.

EOTA Technical Reports go into detail in some aspects and express the common understanding of existing knowledge and experience of the EOTA bodies at a particular point in time.

Where knowledge and experience is developing, especially through approval work, such reports can be amended and supplemented.

When this happens, the effect of the changes upon the European Technical Approval Guidelines will be laid down in the relevant comprehension documents, unless the European Technical Approval Guideline is revised.

This EOTA Technical Report has been prepared by the EOTA Working Group 04.02/01 – “Liquid applied roof waterproofing Kits” and endorsed by EOTA.

1 Scope

This EOTA Technical Report specifies the method for the determination of the resistance to sliding of partially and fully bonded installed product of liquid applied roof waterproofing kits.

2 Principle

The resistance to sliding due to the self weight of the partially or fully bonded installed product is determined, using a defined substrate and slope, by heating the test specimen of the installed product for a specified period of time in a heat chamber and measuring the displacement of the installed product with reference to the substrate.

3 Apparatus

3.1 Heat chamber

Oven with forced air circulation: with temperature regulation in the range of 50 to 100°C with an accuracy of $\pm 2^\circ\text{C}$ with a size which can contain the frame (see clause 3.2).

3.2 Frame

To support the test specimen, adjustable to the given slope between 0° and 90° with an accuracy of 2° with sizes according the dimensions of the substrate (see 4.1).

3.3 Cutting device

To cut the test pieces and the test specimens to the specified dimensions.

3.4 Sliding calliper

Permitting reading to an accuracy of 0,1 mm.

3.5 Scribing pen and metal ruler

3.6 Thin aluminium plates

Thickness e.g. 1 mm; dimensions 50 mm x 100 mm.

3.7 Guide marks

e.g. screws or bolts and nuts.

4 Test specimen

4.1 Dimensions

The test specimen is the partially or fully bonded installed product of a liquid applied roof waterproofing kit, including its substrate.

The substrate shall be concrete and shall have a width of 320 mm and a length of 320 mm. The test specimen shall have a width of (300 ± 1) mm and a length of (300 ± 1) mm.

4.2 Number of test specimens

The number of test specimens is three.

4.3 Preparation

The roof waterproofing kit shall be applied as prescribed by the applicant to the substrate.

The substrate shall be larger than the test specimen of the installed product.

Put both guide marks in place as shown in Figure 1.

Glue the thin aluminium plates along the edges and in the middle to the surface of the test specimen in line with the guide marks (see Figure 1) and draw a line on the aluminium plates, using a scribing pen and a metal ruler, placed against the guide marks.

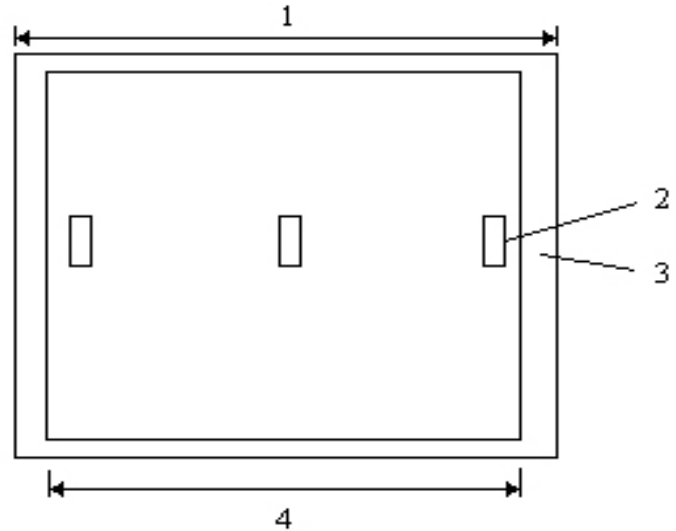


Figure 1 - Plan of the test specimen

1 – substrate; 2 – aluminium plates; 3 – guide marks; 4 – installed product

4.4 Curing and conditioning

The installed product shall be cured at a temperature of (23 ± 2) °C and a relative humidity of (50 ± 5) % for at least the period as prescribed by the manufacturer of the kit.

After attaching the aluminium plates to the surface of the cured installed product, the test specimen shall be conditioned at a temperature of (23 ± 2) °C and a relative humidity of (50 ± 5) % until the adhesive has sufficient strength, and at least for a period of 16 hours.

5 Procedure

5.1 Test conditions

The test shall be carried out at the temperature and the maximum slope as defined in the product categorization to slope.

5.2 Test procedure

5.2.1 Bring the heat chamber to the required temperature as specified.

5.2.2 Place the frame, adjusted to the slope as specified and containing the test specimen, in the heat

chamber and maintain the temperature for a period of 7 days.

5.2.3 After 7 days of exposure remove the test specimen from the heat chamber and allow it to cool in horizontal position for a period of at least 16 hours at a temperature of (23 ± 2) °C and at a relative humidity of (50 ± 5) %.

5.2.4 Draw a new line on the aluminium plates by using the scribing pen and the metal ruler, placed against the guide marks.

5.2.5 Measure the distance between the initial line and this new line on all three aluminium plates with the sliding calliper to an accuracy of 0,1 mm.

5.2.6 Record any displacement.

5.2.7 Perform the test on the remaining test specimens.

6 Expression of results

Record, as result of the tests the calculated arithmetical mean displacement of each individual test specimen with reference to its substrate with an accuracy of 0,1 mm.

Record the calculated arithmetical mean value of displacement.

The installed product is considered to be proven when all three specimens pass the test.

7 Test report

The test report shall include the following information:

- a. reference to this Technical Report;
- b. the name of the testing laboratory;
- c. date of testing;
- d. description of the installed product, including dimensions, curing and conditioning;
- e. description of the substrate and the angle of slope (used for classification);

- f. the test conditions;
- g. description of the measured relative displacements and the arithmetical mean value;
- h. description of the failure mode, if any;
- i. all operating details not specified in this Technical Report, as well as incidents likely to have influenced the results.

Annex A Bibliography

- Directive Générale UEAtc pour l'Agrément des revêtements d'étanchéité des toitures - July 1982.