

Test Report

WARRES No. 126877

BS 476: Part 6: 1989
Method Of Test For
Fire Propagation For Products

Sponsored By

Armacell UK Limited.
Mars Street
Oldham
Lancashire
OL9 6LY

*W*arrington
FIRE
research

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1 **Purpose Of Test**

To determine the fire propagation index of specimens of a product when they are tested in accordance with BS 476: Part 6: 1989 'Fire tests on building materials and structures, method of test for fire propagation for products'.

2 **Scope Of Test**

BS 476: Part 6: 1989 specifies a method of test, the result being expressed as a fire propagation index, that provides a comparative measure of the contribution to the growth of fire made by an essentially flat material, composite or assembly. It is primarily intended for the assessment of the performance of internal wall and ceiling linings.

3 **Description Of Test Specimens**

The description of the specimens given below has been prepared from information provided by the sponsor of the test. All values quoted are nominal, unless tolerances are given.

The product was 'Arma-Chek R', a vulcanized EPDM sheet having a thickness of 1mm and a density 1.645g/m^3 , bonded to one face of a 12mm thick calcium silicate based board having an oven dry density of 875kg/m^3 , utilizing a sodium silicate based adhesive.

The specimens were supplied by the sponsor. Warrington Fire Research Centre was not involved in any selection or sampling procedure. Warrington Fire Research Centre supplied the substrate and adhesive and bonded the composite together.

4 **Conditioning Of Specimens**

The specimens were received on the 30th August 2002.

Prior to testing the specimens were conditioned to constant mass at a temperature of $23 \pm 2^\circ\text{C}$ and a relative humidity of $50 \pm 10\%$.

5 Date Of Test

The test was performed on the 11th and 12th September 2002.

6 Test Procedure

The test was performed in accordance with the procedure specified in BS 476: Part 6: 1989 and this report should be read in conjunction with that British Standard.

7 Form In Which Specimens Were Tested

The specimens were tested in the form of a composite.

8 Exposed Face

The 'Arma-Chek R' face of the specimens was exposed to the heating conditions of the test.

9 Test Results

The test results relate only to the behaviour of the test specimens of the product under the particular conditions of test, they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

The test results relate only to the specimens of the product in the form in which they were tested. Small differences in the composition or thickness of the product may significantly affect the performance during the test and may therefore invalidate the test results. Care should be taken to ensure that any product which is supplied or used is fully represented by the specimens which were tested.

A total of three specimens was tested. The laboratory record sheet relating to each of the test specimens is appended to this report.

Throughout the test on each specimen careful observation was made of the product's behaviour within the apparatus and special note was taken of any of the phenomena listed in clause 10.2 of the Standard. None of the listed phenomena was observed and the test results on all three specimens tested were valid.

The following test results were obtained for the product.

Fire propagation index, I	=	6.3
subindex, i_1	=	0.5
subindex, i_2	=	5.0
subindex, i_3	=	0.8

NOTE: If a suffix 'R' is included in the above fire propagation index, I, then this indicates that the results should be treated with caution.

10 Interpretation Of Test Results

Attention is drawn to Appendix 1, entitled 'Effect of thermal characteristics on the performance of assemblies'.

11 Validity

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons it is recommended that the relevance of test reports over five years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test to ensure that they are consistent with current practices, and if required may endorse the test report.

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Responsible Officer



J COAKLEY
Technical Officer
Testing Department

Approved



C DEAN
Laboratory Supervisor
Testing Department
for and on behalf of
WARRINGTON FIRE RESEARCH CENTRE

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