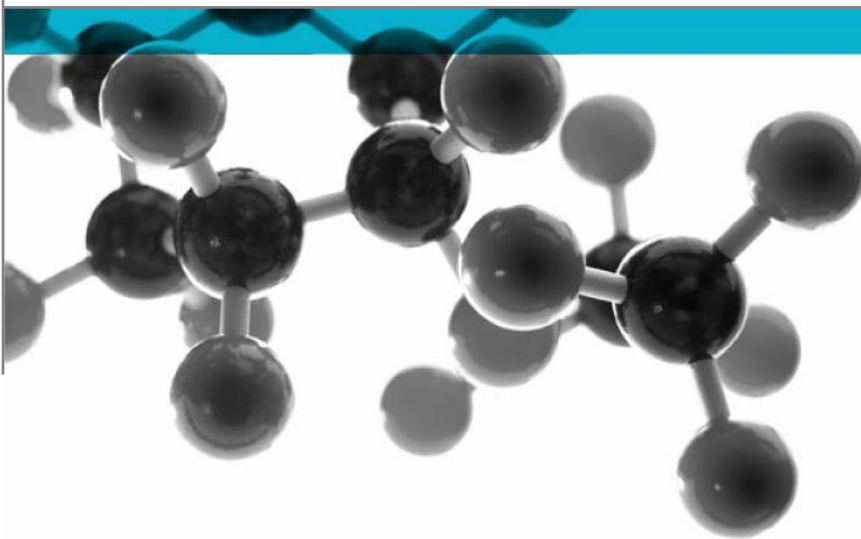


Class 0 Summary Report



Including Opinion Of Compliance With The Requirements For A Class 0 Surface As Defined In Paragraph A13(b) Of Approved Document B (Volumes 1 & 2), (2006 Edition) 'Fire Safety' To The Building Regulations 2000

Date: 16th June 2017

Issue No.: 2

Page 1

A Report To: AFS Boru Sanayi A.S.

Document Reference: 382366 & 382367

**Testing
Advising
Assuring**

Executive Summary

Objective To assess the results of tests to BS 476:Part 6:1989+A1: 2009 and BS 476:Part 7:1997, obtained on specimens of the following product and to provide an opinion of compliance with the requirements for a Class 0 surface, as defined in Approved Document B to the Building Regulations 2000.

Generic Description	Product reference	Thickness	Weight per unit area or density
Flexible ducting product	"ALUAFS.70"	74 microns	120±5% g/m ²
Individual components used to manufacture composite:			
Aluminium foil	Unwilling to provide	9 microns	2.72 g/cm ³
Adhesive	Unwilling to provide	6 microns	Unwilling to provide
Polyester film	Unwilling to provide	12 microns	1.40 g/cm ³
Please see pages 5 & 6 of this test report for the full description of the product tested			


Test Sponsor AFS Boru Sanayi A.S., Kuskondu Sk. 1, Çankaya, Ankara, Turkey

Opinion: We consider the results of the tests to BS 476:Part 6:1989+A1: 2009 and BS 476:Part 7: 1997, demonstrate that the product, as tested, complies with the requirements for Class 0, as defined in paragraph A13(b) of Approved Document B, 'Fire Safety', to the Building Regulations 2000.


Date of Test 26th, 27th & 28th April & 3rd May 2017

Reason for revision This document replaces issue 1 (dated 31st May 2017) of the same number which has been withdrawn. The product reference was incorrect and has been corrected in this issue 2 report.

Signatories



Responsible Officer
C. Meachin *
Technical Officer



Authorised
B. Dean *
Technical Leader

* For and on behalf of **Exova Warringtonfire**.

Report Issued: 16th June 2017

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Test Details

Terms Of Reference To assess the results of tests to BS 476:Part 6:1989+A1: 2009 and BS 476:Part 7:1997, obtained on specimens of a product and to provide an opinion of compliance with the requirements for a Class 0 surface, as defined in Approved Document B to the Building Regulations 2000.

Introduction Specimens of a product have been tested in accordance with the test methods specified in BS 476: Part 6: 1989+A1: 2009 'Method of test for fire propagation for products' and BS 476: Part 7: 1997 'Method of test to determine the classification of the surface spread of flame of products'. The results of the tests are fully reported in the **Exova Warringtonfire** test reports No's.382366 and 382367.

This summary test report has been prepared at the request of the sponsor and relates the results of the tests to the requirements for a Class 0 surface of a material or composite product, as defined in paragraph A13(b) of Approved Document B, 'Fire Safety', to the Building Regulations 2000.

This summary should be read in conjunction with, and not accepted as a substitute for, the **Exova Warringtonfire** test reports No's. 382366 and 382367. Those test reports may include additional information which may be relevant to the assessment of the potential fire hazard of the product.

The specimens were tested with an airgap positioned behind the product as described in test report No. 382366 and test report No. 382367.

Face subjected to tests The specimens were mounted in the test positions such that the external aluminium foil face was exposed to the heating conditions of the tests.

Results of test The following results were obtained for the specimens, which were tested.

BS 476: Part 6: 1989+A1: 2009	Fire propagation index, I	=	4.9
	subindex, i_1	=	4.0
	subindex, i_2	=	0.9
	subindex, i_3	=	0.0

BS 476: Part 7: 1997 Class 1 surface spread of flame

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

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.

General Description		Flexible ducting product comprising: <ul style="list-style-type: none"> • Aluminium Foil • Adhesive • Polyester Film • Adhesive • Aluminium Foil • Adhesive • Polyester Film • Adhesive • Aluminium Foil <p>In practice, the product tested is used to form a cylindrical duct that incorporates a reinforcing steel wire helix</p>
Product reference		"ALUAFS.70"
Name of manufacturer		AFS
Weight per unit area		120±5% g/m ² (stated by sponsor) 115.6g/m ² (determined by Exova Warringtonfire)
Thickness		74 microns (stated by sponsor) 0.05mm (determined by Exova Warringtonfire)
Component 1, 5 & 9 (Aluminium foil)	Product Reference	See Note 1 below
	Generic type	Aluminium
	Name of manufacturer	See Note 1 below
	Density	2.72g/cm ³
	Thickness	9 microns
Flame retardant details		See Note 1 below
Component 2, 4, 6 & 8 (Adhesive)	Product Reference	See Note 1 below
	Generic type	See Note 1 below
	Name of manufacturer	See Note 1 below
	Thickness	6 microns
	Application rate	See Note 1 below
Flame retardant details		See Note 1 below
Component 3 & 7 (Polyester film)	Product Reference	See Note 1 below
	Generic type	Polyester film
	Name of manufacturer	See Note 1 below
	Density	1.40g/cm ³
	Thickness	12 microns
Flame retardant details		See Note 1 below

Specimen construction details	'ALUAFS.70' ducting in practice would encapsulate a high tensile steel wire helix to form the wall of the air ducting. It is not practicable to include the wire helix within the specimens and for this reason; the laminate only was tested with a 12.5mm airspace for BS 476 part 6 and 25mm airspace for BS 476 Part 7 at the back of the product. It is considered that the inclusion of the wire helix would not have any detrimental effect on the flame-spread or fire propagation characteristics of the actual product. Since the specimens consist of a modified version of the actual product, a prefix 'D' is added to the BS 476 Part 7 classification
Brief description of manufacturing process	See Note 1 below

Note 1: The sponsor of the test was unwilling to provide this information

Classification

Opinion

We consider the results of the tests detailed above demonstrate that the product, as tested, complies with the requirements for Class 0, as defined in paragraph A13(b) of Approved Document B, 'Fire Safety', to the Building Regulations 2000.

Validity of opinion

This opinion is based on the requirements of the Building Regulations at the date of this report. If the Building Regulations are revised or amended in any way subsequent to that date, care must be taken to ensure that this opinion is not invalidated by those revisions or amendments.

The opinion has been formulated on the assumption that the specimens are representative of the product in practice. **Exova Warringtonfire** was not involved in any sampling or selection procedures which would confirm this or in any audit testing which would provide confidence in the consistency of the product in the tests.

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Revision History

Issue No : 2	Re-issue Date: 16 th June 2017
Revised By: C. Meachin	Approved By: B. Dean
Reason for Revision: This document replaces issue 1 (dated 31 st May 2017) of the same number which has been withdrawn. The product reference was incorrect and has been corrected in this issue 2 report.	

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