



SLOVENSKI STANDARD SIST EN 15715:2010

01-april-2010

Toplotnoizolacijski proizvodi - Navodila za vgradnjo in pritrjevanje za preskuse odziva na ogenj - Tovarniško izdelani proizvodi

Thermal insulation products - Instructions for mounting and fixing for reaction to fire testing - Factory made products

Wärmedämmstoffe - Einbau- und Befestigungsbedingungen für die Prüfung des Brandverhaltens - Werkmäßig hergestellte Wärmedämmstoffe

Produits isolants thermiques - Instructions de montage et de fixations pour l'essai de réaction au feu - Produits isolants thermiques manufacturés

[https://standards.iteh.ai/catalog/standards/sist/4dfcd48-130e-4a89-ac69-](https://standards.iteh.ai/catalog/standards/sist/4dfcd48-130e-4a89-ac69-d1c1ffc411a/sist-en-15715-2010)

Ta slovenski standard je istoveten z: EN 15715:2009

ICS:

13.220.50	Požarna odpornost gradbenih materialov in elementov	Fire-resistance of building materials and elements
91.100.60	Materiali za toplotno in zvočno izolacijo	Thermal and sound insulating materials

SIST EN 15715:2010

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 15715:2010

<https://standards.iteh.ai/catalog/standards/sist/4dfcdf48-130e-4a89-ac69-d1c1fff411a/sist-en-15715-2010>

EUROPEAN STANDARD

EN 15715

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2009

ICS 91.100.60

English Version

Thermal insulation products - Instructions for mounting and fixing for reaction to fire testing - Factory made products

Produits isolants thermiques - Instructions de montage et de fixations pour l'essai de réaction au feu - Produits isolants thermiques manufacturés

Wärmedämmstoffe - Einbau- und Befestigungsbedingungen für die Prüfung des Brandverhaltens - Werkmäßig hergestellte Wärmedämmstoffe

This European Standard was approved by CEN on 29 September 2009.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/4dfcd48-130e-4a89-ac69-d1c1ffc411a/sist-en-15715-2010>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	5
1 Scope	9
2 Normative references	9
3 Terms, definitions and abbreviated terms	9
3.1 Terms and definitions	9
3.2 Abbreviated terms used in this European Standard	10
4 Principle	10
5 Instructions for mounting and fixing of test specimens	11
5.1 General	11
5.2 Product and installation parameters	11
5.3 Mounting and fixing	12
5.3.1 Ignitability, EN ISO 11925-2 Exposure to thermal attack	12
5.3.2 Single Burning Item (SBI), EN 13823	12
5.4 Validity of test results for product groups (Field of application)	18
6 Instructions for mounting and fixing of products in standardised assemblies simulating end-use application(s)	18
6.1 General	18
6.2 Product and installation parameters	19
6.3 Mounting and fixing	20
6.3.1 Ignitability, EN ISO 11925-2	20
6.3.2 Single Burning Item (SBI) (EN 13823)	20
6.4 Validity of test result for a product group (Field of application)	25
Annex A (normative) Product specific details	26
A.1 General	26
A.2 Mineral wool (MW)	26
A.3 Expanded polystyrene (EPS)	34
A.4 Extruded polystyrene foam (XPS)	39
A.5 Polyurethane and polyisocyanurate (PUR/PIR)	44
A.6 Phenolic Foam (PF)	50
A.7 Cellular Glass (CG)	56
A.8 Wood Wool (WW)	63
A.9 Expanded perlite (EPB)	67
A.10 Expanded cork (ICB)	70
A.11 Wood fibre (WF)	73
A.12 Flexible elastomeric foam (FEF)	76
A.13 Calcium silicate (CS)	82
Thickness	84
Exposure to thermal attack	85
Size and positioning of test specimen	85
Fixing of test specimen	85
A.14 Polyethylene foam (PEF)	88
Bibliography	94
Tables	
Table 1 — Product parameters	11

Table 2 — Installation parameters	12
Table 3 — Thermal insulation product parameters in standardised assemblies	19
Table 4 — Installation parameters of standardised assemblies.....	19
Table 5 — Standard test configurations of standardised assemblies	21
Table A.1 — Product parameters for MW – flat products, when tested as placed on the market or in standard test configuration of assemblies.....	26
Table A.2 — Installation parameters for MW – flat products, as placed on the market.....	29
Table A.3 — Product parameters for MW – pipe insulation products, as placed on the market	30
Table A.4 — Installation parameters for MW – pipe insulation products, as placed on the market.....	31
Table A.5 — Installation parameters for MW – flat products in standard test configuration of assemblies, simulating end-use applications	32
Table A.6 — Product parameters for EPS – flat products, when tested as placed on the market or in standard test configuration of assemblies.....	34
Table A.7 — Installation parameters for EPS – flat products as placed on the market.....	35
Table A.8 — Product parameters for EPS – pipe insulation products, as placed on the market	36
Table A.9 — Installation parameters for EPS – pipe insulation products, as placed on the market.....	37
Table A.10 — Installation parameters for EPS – flat products in standard test configuration of assemblies, simulating end-use applications	38
Table A.11 — Product parameters for XPS – flat products when tested as placed on the market or in standard test configuration of assemblies.....	39
Table A.12— Installation parameters for XPS – flat products as placed on the market	40
Table A.13 — Product parameters for XPS – pipe insulation products, as placed on the market	41
Table A.14 — Installation parameters for XPS – pipe insulation products, as placed on the market.....	42
Table A.15 — Installation parameters for XPS – flat products in standard test configuration of assemblies, simulating end-use applications	43
Table A.16 — Product parameters for PUR/PIR – flat products when tested as placed on the market or in standard test configuration of assemblies.....	44
Table A.17 — Installation parameters for PUR/PIR – flat products, as placed on the market.....	45
Table A.18 — Product parameters for PUR/PIR – pipe insulation products, as placed on the market ...	46
Table A.19 — Installation parameters for PUR/PIR - pipe insulation products, as placed on the market	47
Table A.20 — Installation parameters for PUR/PIR – flat products in standard test configuration of assemblies, simulating end-use applications	48
Table A.21 — Product parameters for PF – flat products, when tested as placed on the market or in standard test configuration of assemblies.....	50
Table A.22 — Installation parameters for PF – flat products, as placed on the market.....	51
Table A.23 — Product parameters for PF – pipe insulation products, as placed on the market	52
Table A.24 — Installation parameters for PF – pipe insulation products, as placed on the market.....	53
Table A.25 — Installation parameters for PF – flat products in standard test configuration of assemblies, simulating end-use applications	54
Table A.26 — Product parameters for CG – flat products when tested as placed on the market or in standard test configuration of assemblies.....	56
Table A.27 — Installation parameters for CG – flat products, as placed on the market.....	58
Table A.28 — Product parameters for CG – pipe insulation products ^a , as placed on the market.....	59
Table A.29 — Installation parameters for CG- linear pipe thermal insulation.....	60
Table A.30— Installation parameters for CG — flat products, in standard test configuration of assemblies simulating end-use applications	61
Table A.31 — Product parameters for WW — flat products, when tested as placed on the market or in standard test configuration of assemblies.....	63
Table A.31 (<i>continued</i>)	64
Table A.32 — Installation parameters WW — flat products, as placed on the market.....	65

EN 15715:2009 (E)

Table A.33 — Installation parameters for WW – flat products in standard test configuration of assemblies simulating end-use applications	66
Table A.34 — Product parameters for EPB – flat products, when tested as placed on the market or in standard test configuration of assemblies	67
Table A.35— Installation parameters for EPB – flat products, as placed on the market	68
Table A.36— Installation parameters for EPB – flat products in standard test configuration of assemblies simulating end-use applications	69
Table A.37 — Product parameters for ICB flat products, when tested as placed on the market or in standard test configuration of assemblies	70
Table A. 38— Installation parameters for ICB – flat products, as placed on the market	71
Table A.39 — Installation parameters for ICB – flat products in standard test configuration of assemblies simulating end-use applications	72
Table A.40 — Product parameters for WF – flat products, when tested as placed on the market or in standard test configuration of assemblies	73
Table A.41— Installation parameters for WF – flat products, as placed on the market	74
Table A.42— Installation parameters for WF – flat products, in standard test configuration of assemblies simulating end-use applications	75
Table A.43 — Product parameters for FEF – flat products, when tested as placed on the market or in standard test configuration of assemblies	76
Table A.44 — Installation parameters for FEF – flat products, as placed on the market.....	77
Table A.45 — Product parameters for FEF – pipe insulation products, as placed on the market	78
Table A.46 — Installation parameters for FEF – pipe insulation products, as placed on the market.....	79
Table A.47 — Installation parameters for FEF – for flat products in standard test configuration of assemblies simulating end-use applications	80
Table A.48 — Product parameters for CS – flat products when tested as placed on the market or in standard test configuration of assemblies	82
Table A.49 — Installation Parameters for CS – flat products as placed on the market	83
Table A.50 – Product parameters for CS – pipe insulation products, as placed on the market.....	84
Table A.51 – Installation parameters for CS – pipe insulation products, as placed on the market.....	85
Table A.52 — Installation parameters for CS – flat products in standard test configuration of assemblies simulating end-use applications	86
Table A.53 — Product parameters for PEF, flat products when tested as placed on the market or in standard test configuration of assemblies	88
Table A.54 — Installation parameters for PEF flat products, as placed on the market.....	89
Table A.55 — Product parameters for PEF – pipe insulation products as placed on the market.....	90
Table A.56 — Installation parameters for PEF – pipe insulation products as placed on the market	91
Table A.57 — Installation parameters for PEF – for flat products in standard test configuration of assemblies simulating end-use applications	92
Figures	
Figure 1 — Installation of specimen according to EN 13823	15
Figure 2 — Principle of positioning of minimum mechanical fixings	16
Figure 3 — Joint arrangement for a product tested uncovered (front view)	16
Figure 4 — Schematic drawings of the mounting of the test specimens in the SBI in the case of 25 mm insulation thickness	17
Figure 5 — Fixing corrugated steel sheet (New figure is being drawn).....	24

Foreword

This document (EN 15715:2009) has been prepared by Technical Committee CEN/TC 88 "Thermal insulating materials and products", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2010, and conflicting national standards shall be withdrawn at the latest by August 2011.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 89/106/EEC.

For relationship with EU Directive 89/106/EEC, see informative Annex ZA, which is an integral part of this document.

In pursuance of the mandate M/103 given to CEN by the European Commission and the European Free Trade Association, CEN/TC 88 had prepared a package of European Standards which was published in 2001. The aspect of instructions for mounting and fixing for reaction to fire testing not treated at that time is now being dealt within this European Standard.

This European Standard supports a series of product standards for thermal insulating materials and products which derive from the Council Directive of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (Directive 89/106/EEC) through the consideration of the essential requirements.

This European Standard provides instructions for mounting and fixing for reaction to fire testing procedure for factory made thermal insulation products in building, building equipment and industrial installations.

CEN/TC 88 have proposed to set the date of withdrawal (dow) of national standards which conflict with this European Standard 21 months after availability.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

EN 15715:2009 (E)

The moment this European Standard will have passed the CEN Formal Vote, subsequent alignments will have to be included in the relevant standards EN 13162 to EN 13171 as amendment:

Clause	Title	Alignment
4.2.xx ^{a)}	Reaction to fire	<p>Addition to Title: of the product as placed on the market</p> <p>New text: Reaction to fire classification of the product, as placed on the market, shall be determined in accordance with EN 13501-1 and the basic Mounting and Fixing rules given in EN 15715:2009.</p> <p>NOTE 1 This classification is compulsory and always included in the CE Marking label.</p> <p>Detailed information about the test conditions and the field of application of the classification as stated in the reaction to fire classification report shall be given in the manufacturer's literature.</p> <p>Manufacturers declaring Euroclass A1 without further test shall demonstrate by testing in accordance with EN 13820 that the products do not contain more than 1,0 % by weight of organic matter.</p> <p>NOTE 2 The commission decision 96/603/EC of 4 October 1996 amended by the commission Decision 00/605/EC of 26 September 2000 gives the list of products to be considered as reaction to fire class Euroclass A1 without the need for testing.</p>
4.3.xx ^{a)}		<p>New Clause Title: Reaction to fire of product in standardized assemblies simulating end-use applications</p> <p>Text: Reaction to fire classification of products in standardized assemblies simulating end-use applications excluding pipe insulation, shall be determined in accordance with EN 13501-1 and the basic Mounting and Fixing rules given in EN 15715:2009.</p> <p>This classification offers the opportunity to give a complementary and optional declaration on reaction to fire for standard test configurations of assemblies which include the insulation product.</p> <p>The number of the selected test configuration of assembly (Table 5 of EN 15715:2009) which is used in the test shall be quoted with the Euroclass.</p> <p>Detailed information about the test conditions and the field of application of the classification as stated in the reaction to fire classification report shall be given in the manufacturer's literature.</p>
5., Table 7	Test methods, Table 7.	<p>4.2xx^{a)} Add: Under "specific conditions", column 5, "See Clause 5 of EN 15715:2009"</p> <p>Add: 4.3.xx Across columns 2, 3 and 4 add: see EN 13501-1 column 5 add see Clause 6 of EN 15715:2009.</p>

Clause	Title	Alignment
8.	Marking and Labelling	<p>Replace Clause 8 by:</p> <p>Products conforming to this standard shall be marked clearly, either on the product or on the label or on the packaging, with the following information:</p> <ul style="list-style-type: none"> — product name or other identifying characteristic; — name or identifying mark of the manufacturer or his authorised representative; — address of the manufacturer or his authorised representative; — shift or time of production or traceability code; — reaction to fire class of the product as placed on the market. <p>This classification shall be identified with the designation "product" after the classification.</p> <p>If tests on standardised assemblies have been performed according to Clause 6 of EN 15715:2009, then the reaction to fire classification shall be added and identified with the designation "standardised assembly no. x" after the classification. This information shall be kept distinct from the CE marking.</p> <p>The number of the standardised assembly is taken from Table 5 of EN 15715:2009. Reference to manufacturer's literature (ML) for further information:</p> <ul style="list-style-type: none"> — declared thermal resistance; — declared thermal conductivity; — nominal thickness; — designation code as given in Clause 6; — nominal length; — nominal width; — type of facing, if any; — number of pieces and area in the package, as appropriate. <p>NOTE : For CE marking and labelling see ZA.3.</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Any other voluntary information on the product such as:</p> <ul style="list-style-type: none"> — Reaction to fire for standardised assembly No. 1, 2, 3, 4 — Voluntary marks </div> <p>Figure x^a): Example of additional voluntary information.</p>
a) Number depends on the relevant product standard.		

EN 15715:2009 (E)

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 15715:2010](https://standards.iteh.ai/catalog/standards/sist/4dfcd48-130e-4a89-ac69-d1c1fff411a/sist-en-15715-2010)

<https://standards.iteh.ai/catalog/standards/sist/4dfcd48-130e-4a89-ac69-d1c1fff411a/sist-en-15715-2010>

1 Scope

This European Standard specifies instructions for mounting and fixing for reaction to fire testing of factory made thermal insulation products.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 312 (all parts), *Particleboards — Specifications*

EN 508-1, *Roofing products from metal sheet — Specification for self-supporting products of steel, aluminium or stainless steel sheet — Part 1: Steel*

EN 520, *Gypsum plasterboards — Definitions, requirements and test methods*

EN 13172, *Thermal insulating products — Evaluation of conformity*

EN 13238, *Reaction to fire tests for building products — Conditioning procedures and general rules for selection of substrates*

EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using test data from reaction to fire tests* (standards.iteh.ai)

EN 13823, *Reaction to fire tests for building products — Building products excluding floorings exposed to the thermal attack by a single burning item* [SIST EN 15715:2010](https://standards.iteh.ai/catalog/standards/sist/4dfcd48-130e-4a89-ac69-312187-114e31e0d15715-2010)

EN 13963, *Jointing materials for gypsum plasterboards — Definitions, requirements and test methods*

EN ISO 1182, *Reaction to fire tests for building products — Non-combustibility test (ISO 1182:2002)*

EN ISO 1716, *Reaction to fire tests for building products — Determination of the heat of combustion (ISO 1716:2002)*

EN ISO 9229:2007, *Thermal insulation — Vocabulary (ISO 9229:2007)*

EN ISO 11925-2, *Reaction to fire tests — Ignitability of building products subjected to direct impingement of flame — Part 2: single-flame source test (ISO 11925-2:2002)*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 9229:2007 and the following apply.

3.1.1

asymmetrical thermal insulation product

product that has no plane of symmetry in the thickness

EN 15715:2009 (E)**3.1.2****installation parameter**

aspect of mounting and fixing (e.g. substrate, joints, fixing method, air gap), which may vary and which may or may not have an influence on the test performance

3.1.3**pipe insulation**

insulation product designed to fit around pipes

NOTE From fire respective "pipe insulation" is considered as linear product.

3.1.4**product as placed on the market**

insulation product complying with the scope of this standard (product itself)

3.6**product parameter**

aspect of a product (e.g. thickness, composition, density), which may vary and which may or may not have an influence on the test performance

3.2 Abbreviated terms used in this European Standard

CWFT **C**lassification **W**ithout **F**urther **T**esting

PCS **P**ouvoir **C**alorifique **S**upérieur (engl.: gross heat of combustion)

SBi **S**ingle **B**urning item

iteh STANDARD PREVIEW
(standards.iteh.ai)

4 Principle

SIST EN 15715:2010

<https://standards.iteh.ai/catalog/standards/sist/4dfcd48-130e-4a89-ac69-8e8541181000>

The reaction to fire classification (Euroclasses) shall be determined in accordance with EN 13501-1, respecting the test conditions laid down in this standard.

The classification for the product as placed on the market is without any non-integrated installation means, e.g. glues, sealants.

Thermal insulation products shall be tested in accordance with Clause 5 of this standard. This classification is compulsory and shall be included in the marking and labelling. Detailed information about the test conditions and the field of application of the classification as stated in the reaction to fire classification report shall be given in the manufacturer's literature and in the declaration of conformity.

Additional and optional reaction to fire tests of standardised assemblies simulating end-use applications, excluding pipe-insulation and which incorporate thermal insulation products, may be performed according to Clause 6 of this standard. This additional test data will allow the manufacturer the opportunity to give a complementary and optional declaration (where required) on reaction to fire for a standardised end-use application/assembly which includes the insulation product. The number of the selected test configuration of the assembly (Table 5) that is used shall be quoted with the Euroclass. Detailed information about the test conditions and the field of application of the classification as stated in the reaction to fire classification report shall be given in the manufacturer's literature. This information shall be kept distinct from the CE marking when labelling products.

NOTE 1 In respect of the standardised assemblies, it is understood that the manufacturer of the thermal insulation cannot take responsibility for the quality of the installation, neither for the way the insulation is installed.

NOTE 2 For pipe insulation, especially since the variety of end-uses, no standardised assemblies have been defined. Instructions for mounting and fixing of test specimens.

5 Instructions for mounting and fixing of test specimens

5.1 General

This clause gives instructions for mounting and fixing for reaction to fire testing of thermal insulation products as placed on the market (product itself) and includes the field of application of the test results in 5.4.

This subclause is related to 4.2 in the main body of the product standards, e.g. EN 13162 or EN 14303.

5.2 Product and installation parameters

Tables 1 and 2 give the parameters that have to be taken into account when determining a product's reaction to fire performance and the field of application of the test results. The following tables are valid for both, flat products and pipe insulation.

NOTE 1 Ageing or washing procedures are Not applicable for the test specimens.

NOTE 2 Prefabricated shapes, e.g. elbows, T-pieces shall be deemed to have the same fire classification as tested products of the same product group.

Table 1 — Product parameters

Product Parameters	EN ISO 1182 (class A1 and A2)	EN ISO 1716 (class A1 and A2)	EN 13823 (class A1 to D)	EN ISO 11925-2 (class B to E)
All products				
Thickness	—	—	X	X
Density	X	—	X	X
Type of product	X	X	X	X
Additional properties for faced and/or coated thermal insulation products				
Type of facing(s) or coating(s)	—	X	X	X
Thickness/area weight of facing(s) or coating(s)	—	X	X	X
Type and amount of adhesive for facing(s) or coating(s)	—	X	X	X
Asymmetry	—	—	X	X

Table 2 — Installation parameters

Parameter	EN 13823 (class A1 to D)	EN/ISO 11925-2 (class B to E)
Exposure to thermal attack	X	X
Substrate	X	—
Air gaps / Cavities	X	—
Joints/edges	X	X ^{a)}
Size and positioning of test specimen	X	—
Product orientation and geometry	X	X
Fixing of test specimen	X	—
a) For pipe insulation only		

5.3 Mounting and fixing

5.3.1 Ignitability, EN ISO 11925-2 Exposure to thermal attack

The product shall be tested directly exposed to the thermal attack.

Both surface and edge shall be exposed to the flame. If a product is produced with closed edges, the closed edge shall be exposed to the flame.

SIST EN 15715:2010

5.3.1.1 Substrate <https://standards.iteh.ai/catalog/standards/sist/4dfcd48-130e-4a89-ac69-d1c1fff411a/sist-en-15715-2010>

The test specimen, cut from the product samples including their facings and/or coatings, shall be mounted in the test apparatus without a substrate.

5.3.1.2 Product orientation and geometry

Homogeneous products and products with the same facing or coating on both sides shall be tested on one face only.

If the product surfaces are not the same or the product is asymmetrical, two options are open for declaration:

- either the worse test result will be used to declare the reaction to fire class of the product (valid for both faces exposed); or
- a declaration of the reaction to fire class of each face is made, provided that the identification of the faces is clearly visible in the marking and labelling of the product.

In case of a Euroclass F declaration for one of the faces, no test needs be performed on that face.

5.3.2 Single Burning Item (SBI), EN 13823

5.3.2.1 Exposure to thermal attack

The product shall be tested directly exposed to the thermal attack.

5.3.2.2 Substrate

The type of the substrate is defined in EN 13238.

The general substrate to be used to test the product as placed on the market is made of calcium silicate. For pipe sections steel pipes are used as standard substrate (see 5.3.2.8.2).

For Euroclass A1 classification a calcium silicate substrate is compulsory.

Gypsum plaster board, steel, and wooden particle board substrates such as defined in EN 13238 are permitted to be used instead.

The test conditions and limit to the applicability of the classification shall be given in the declaration of conformity, in the classification report and in the manufacturer's technical literature.

5.3.2.3 Air gaps/cavities

The test specimen (product itself) shall be mounted in the test apparatus without an air gap/cavity (neither between the product and substrate nor between substrate and backing board).

5.3.2.4 Joints/ edges

The general test shall be done with one vertical and one horizontal joint in the long wing. Alternatively, testing can be done either with a horizontal or a vertical joint. Positioning of the joints shall be in accordance with EN 13823. Testing with a vertical and a horizontal joint in the same test reflects a worst case situation and gives the widest field of application.

Test specimens taken from product samples that are small shall be arranged in the test apparatus such that the joints required by EN 13823 are in the correct places. Other joints, resulting from the product size, may also be present. All joints (in the corner and at the long wing) shall be installed without a flashing or a sealant and tightly closed.

Products shall be mounted with the edges as existing; results from testing with butt edges are valid for all types of edges.

If a horizontal or vertical joint is used, the test conditions and field of application of the classification shall be given in the declaration/certification of conformity, in the classification report and in the manufacturer's technical literature.

5.3.2.5 Size and positioning of the test specimen

The size of the test specimens is given in EN 13823. The test specimens shall be cut from the product sample including its facings or coatings. Positioning of the test specimens shall meet the following conditions:

- 5.3.2.4 shall be taken into account;
- products having larger dimensions than the SBI test specimens shall be cut to size;
- products having smaller dimensions than the SBI test specimen shall be mounted in such a way that installation of full size products is started at the bottom corner line between both wings and joints;
- the specimens installed on the short wing shall cover (on their thickness) those installed at the long wing with a butt joint, see Figure 1;
- the maximum thickness of the test specimen including the substrate that can be installed in the SBI is 200 mm.