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COMMISSION DECISION

of 3 May 2000

implementing Council Directive 89/106/EEC as regards the classification of the resistance to fire performance of construction products, construction works and parts thereof

(notified under document number C(2000) 1001)

(Text with EEA relevance)

(2000/367/EC)

(OJ L 133, 6.6.2000, p. 26)

Amended by:

	Official Journal		
	No	page	date
►**M1** Commission Decision 2003/629/EC of 27 August 2003	L 218	51	30.8.2003

Corrected by:

►**C1** Corrigendum, OJ L 219, 14.8.2001, p. 30 (2000/367/EC)

▼B

COMMISSION DECISION

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implementing Council Directive 89/106/EEC as regards the classification of the resistance to fire performance of construction products, construction works and parts thereof

(notified under document number C(2000) 1001)

(Text with EEA relevance)

(2000/367/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products ([1]), as amended by Directive 93/68/EEC ([2]), and in particular Articles 3, 6 and 20 thereof,

Whereas:

(1) Article 3(2) and (3) of Directive 89/106/EEC state that, in order to take account of different levels of protection for the construction works that may prevail at national, regional or local levels, each essential requirement may give rise to the establishment of classes of the interpretative documents. Those documents have been published as the Communication of the Commission with regard to the interpretative documents of Council Directive 89/106/EEC ([3]).

(2) Paragraph 4.2.1 of interpretative document No 2 justifies the need for different levels of the essential requirement ‘Safety in case of fire’ as a function of the type, use and location of the construction work, its layout and the availability of the emergency facilities.

(3) Paragraph 2.2 of interpretative document No 2 lists a number of interrelated measures for the satisfaction of the essential requirement ‘Safety in case of fire’ that together contribute to define the fire safety strategy that can be developed in different ways in Member States.

(4) Paragraph 4.3.1.3 of interpretative document No 2 identifies one of these measures prevailing in Member States that relates to the resistance to fire performance of construction products and/or parts of construction works.

(5) To enable the resistance to fire performance of construction products and construction works or parts thereof to be evaluated, the harmonised solution consists in a system of classes that is included in interpretative document No 2.

(6) This system of classes has been adapted to technical progress in a mandate from the Commission to the European standardisation bodies, CEN and Cenelec.

(7) Article 6(3) of Directive 89/106/EEC states that the Member States may determine the performance levels to be observed in their territory only within the classifications adopted at Community level and only subject to the use of all or some classes or one class.

(8) The measures provided for in this Decision are in accordance with the opinion of the Standing Committee on Construction,

([1]) OJ L 40, 11.2.1989, p. 12.
([2]) OJ L 220, 30.8.1993, p. 1.
([3]) OJ C 62, 28.2.1994, p. 1.

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HAS ADOPTED THIS DECISION:

Article 1

The classification system adopted at Community level for the resistance to fire performance of construction products, construction works and parts thereof shall be as set out in the Annex.

Article 2

This Decision is addressed to the Member States.

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ANNEX

DEFINITIONS, TESTS AND PERFORMANCE CRITERIA

The relevant definitions, tests and performance criteria are fully described in, or referenced from, the European standards referred to in this Annex.

SYMBOLS

R	Load-bearing capacity
E	Integrity
I	Insulation
W	Radiation
M	Mechanical action
C	Self-closing
S	Smoke leakage
P or PH	Continuity of power and/or signal supply
G	Soot fire resistance
K	Fire protection ability
▼M1 D	Stability duration under constant temperature
DH	Stability duration under the standard time-temperature curve
F	Functionality of powered smoke and heat ventilators
B	Functionality of natural smoke and heat ventilators

▼B

Notes

1. The following classifications are expressed in minutes unless otherwise specified.

2. The European standards EN 13501-2, EN 13501-3 ►**M1** , EN 13501-4 ◄ (classification) and EN 1992-1.2, EN 1993-1.2, EN 1994-1.2, EN 1995-1.2, EN 1996-1.2, EN 1999-1.2 (Eurocodes) referred to in this Decision shall be subject to the same safeguard procedures as described in Article 5(1) of Directive 89/106/EEC.

CLASSIFICATIONS

1. **Load-bearing elements without a fire separating function**

Applies to	walls, floors, roofs, beams, columns, balconies, stairs, walkways									
Standard(s)	EN 13501-2; EN 1365-1,2,3,4,5,6; EN 1992-1.2; EN 1993-1.2; EN 1994-1.2; EN 1995-1.2; EN 1996-1.2; EN 1999-1.2									
Classification:										
R	15	20	30	45	60	90	120	180	240	360
Notes	—									

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2. **Load-bearing elements with a fire-separating function**

Applies to	Walls									
Standard(s)	EN 13501-2; EN 1365-1; EN 1992-1.2; EN 1993-1.2; EN 1994-1.2; EN 1995-1.2; EN 1996-1.2; EN 1999-1.2									
Classification:										
RE		20	30		60	90	120	180	240	►M1 360 ◄
REI	15	20	30	45	60	90	120	180	240	►M1 360 ◄
REI-M			30		60	90	120	180	240	►M1 360 ◄
REW		20	30		60	90	120	180	240	►M1 360 ◄
Notes	—									

Applies to	floors and roofs									
Standard(s)	EN 13501-2; EN 1365-2; EN 1992-1.2; EN 1993-1.2; EN 1994-1.2; EN 1995-1.2; EN 1999-1.2									
Classification:										
▼M1 R			30							
▼B RE		20	30		60	90	120	180	240	►M1 360 ◄
REI	15	20	30	45	60	90	120	180	240	►M1 360 ◄
Notes	—									

3. **Products and systems for protecting load-bearing elements or parts of the works**

Applies to	ceilings with no independent fire resistance
Standard(s)	EN 13501-2; ►C1 ENV 13381-1 ◄
Classification: expressed in the same terms as for the load-bearing element being protected	
Notes	If also fulfilling the requirements with regard to the ‘semi-natural’ fire, the symbol ‘sn’ is added to the classification.

Applies to	►M1 fire protective coatings, boards, renderings, claddings and screens ◄
Standard(s)	EN 13501-2; ►C1 ENV 13381-2 to 7 ◄

▼B

Classification: expressed in the same terms as for the load-bearing element being protected	
Notes	—

4. **Non-loadbearing elements or parts of works and products therefor**

Applies to	partitions (including those incorporating uninsulated portions)									
Standard(s)	EN 13501-2; EN 1364-1; EN 1992-1.2; EN 1993-1.2; EN 1994-1.2; EN 1995-1.2; EN 1996-1.2; EN 1999-1.2									
Classification:										
E		20	30		60	90	120			
EI	15	20	30	45	60	90	120	180	240	
EI-M			30		60	90	120	►**M1** 180 ◄	►**M1** 240 ◄	
EW		20	30		60	90	120			
Notes	—									

Applies to	ceilings with independent fire resistance									
Standard(s)	EN 13501-2; EN 1364-2									
Classification:										
EI	15		30	45	60	90	120	180	240	
Notes	The classification is completed by '(a → b)', '(b → a)', or '(a ↔ b)' to indicate whether the element has been tested and fulfils the requirements from above or below only or both.									

Applies to	facades (curtain walls) and external walls (including glazed elements)									
Standard(s)	EN 13501-2; EN 1364-3,4,5,6; EN 1992-1.2; EN 1993-1.2; EN 1994-1.2; EN 1995-1.2; EN 1996-1.2; EN 1999-1.2									
Classification:										
E	15		30		60	90	120			
EI	15		30		60	90	120			
EW		20	30		60					
Notes	The classification is completed by '(i → o)', '(o → i)', or '(i ↔ o)' to indicate whether the element has been tested and fulfils the requirements from the inside or outside only or both. Where required, mechanical stability means that there are no falling parts liable to cause personal injury during the time for the E or EI classification.									

Applies to	raised floors
Standard(s)	EN 13501-2; EN 1366-6

▼B

Classification:										
R	15		30							
RE			30							
REI			30							
Notes	The classification is completed by the addition of the suffix ‘f’ to indicate full fire resistance or ‘r’ to indicate exposure to the reduced constant temperature exposure only.									

Applies to	penetration seals and linear gap seals									
Standard(s)	EN 13501-2; EN 1366-3,4									
Classification:										
E	15		30	45	60	90	120	180	240	
EI	15	20	30	45	60	90	120	180	240	
Notes	—									

Applies to	fire doors and shutters (including those that incorporate glazing and hardware) and their closing devices									
Standard(s)	EN 13501-2; EN 1634-1									
Classification:										
E	15	20	30	45	60	90	120	180	240	
EI	15	20	30	45	60	90	120	180	240	
EW		20	30		60					
Notes	The I classification is completed by the addition of the suffix ‘1’ or ‘2’ to indicate which definition of insulation is used. The addition of the symbol ‘C’ indicates that the product also satisfies the ‘self-closing’ criterion (pass/fail test) ([1]).									

([1]) The ‘C’ classification may be complemented by the digits 0 to 5 according to the use category. Details shall be included in the relevant product technical specification.

Applies to	smoke control doors
Standard(s)	EN 13501-2; EN 1634-3

Classification: S_{200} or S_a depending upon the test conditions fulfilled

Notes	The addition of the symbol ‘C’ indicates that the product also satisfies the ‘self-closing’ criterion (pass/fail test) ([1]).

([1]) The ‘C’ classification may be complemented by the digits 0 to 5 according to the use category. Details shall be included in the relevant product technical specification.

Applies to	closures for conveyers and trackbound transportation systems
Standard(s)	EN 13501-2; EN 1366-7

Classification:

▼B

E	15		30	45	60	90	120	180	240	
EI	15	20	30	45	60	90	120	180	240	
EW		20	30		60					
Notes	►M1 The I classification is completed by the addition of the suffix '1' or '2' to indicate which definition of insulation is used. An I classification shall be generated for those cases where the test specimen is a pipe or duct configuration with no assessment of the closure for the conveyor system. The addition of the symbol 'C' indicates that the product also satisfies the 'self-closing' criterion (pass/fail test) (1) ◄.									

(1) The 'C' classification may be complemented by the digits 0 to 5 according to the use category. Details shall be included in the relevant product technical specification.

Applies to	service ducts and shafts
Standard(s)	EN 13501-2; EN 1366-5

Classification:

E	15	20	30	45	60	90	120	180	240	
EI	15	20	30	45	60	90	120	180	240	
Notes	The classification is completed by '(i → o)', '(o → i)', or '(i ↔ o)' to indicate whether the element has been tested and fulfils the requirements from the inside or outside only or both. In addition, the symbols 'v_e' and/or 'h_o' indicate the suitability for vertical and/or horizontal use.									

Applies to	chimneys
Standard(s)	EN 13501-2; EN 13216

Classification: G + distance in mm (e.g. G 50)

Notes	Distance not required for built-in products.

▼M1

Applies to	Wall and ceiling coverings								
Standard(s)	EN 13501-2; EN 14135								

Classification:

K_1	10								
K_2	10		30		60				

Notes The suffixes '1' and '2' indicate which substrates, fire behaviour criteria and extension rules are used in this classification.

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5. **Products for use in ventilation systems (excluding smoke and heat exhaust ventilation)**

Applies to	ventilation ducts
Standard(s)	EN 13501-3; EN 1366-1

Classification:

▼B

EI	15	20	30	45	60	90	120	180	240	
E			30		60					
Notes	The classification is completed by '(i → o)', '(o → i)', or '(i ↔ o)' to indicate whether the element has been tested and fulfils the requirements from the inside or outside only or both. In addition, the symbols 'v_e' and/or 'h_o' indicate the suitability for vertical and/or horizontal use. The addition of the symbol 'S' indicates the satisfaction of an extra restriction on leakage.									

Applies to	fire dampers
Standard(s)	EN 13501-3; EN 1366-2

Classification:

EI	15	20	30	45	60	90	120	180	240	
E			30		60	90	120			
Notes	The classification is completed by '(i → o)', '(o → i)', or '(i ↔ o)' to indicate whether the element has been tested and fulfils the requirements from the inside or outside only or both. In addition, the symbolts 'v_e' and/or 'h_o' indicate the suitability for vertical and/or horizontal use. The addition of the symbol 'S' indicates the satisfaction of an extra restriction on leakage.									

6. **Products to be used within services**

Applies to	electrical and fibre-optic cables and accessories; conduits and fire protective systems for cables
Standard(s)	EN 13501-3

Classification:

P	15		30		60	90	120			
Notes	—									

Applies to	small diameter power or signal cables or systems (<20 mm diameter and with conductor sizes ≤ 2.5 mm^2)
Standard(s)	EN 13501-3; EN 50200

Classification:

PH	15		30		60	90	120			
Notes	—									

▼M1

7. **Products to be used in smoke and heat control systems**

The standards cited in this section are under preparation and may be due to revision or upgrade.

Applies to	Single compartment smoke control ducts
Standard(s)	EN 13501-4; EN 1363-1, 2, 3; EN 1366-9 EN 12101-7

▼**M1**

Classification: —

E_{300}			30		60	90	120			
E_{600}			30		60	90	120			

Notes The classification is completed by the suffix 'single' to indicate suitability for single compartment use only.

In addition, the symbols, 'v_e' and/or 'h_o' indicate the suitability for vertical and/or horizontal use.

'S' indicates a leakage rate of less than 5 $m^3/hr/m^2$ (All ducts without an 'S' classification must have a leakage rate of less than 10 $m^3/hr/m^2$)

'500', '1 000', '1 500' indicate the suitability for use up to these values of pressure, measured at ambient.

Applies to	Multi-compartment fire resistant smoke control ducts
Standard(s)	EN 13501-4; EN 1363-1, 2, 3; EN 1366-8; EN 12101-7

Classification: —

EI			30		60	90	120			

Notes The classification is completed by the suffix 'multi' to indicate suitability for multi-compartment use.

In addition, the symbols 'v_e' and/or 'h_o' indicate the suitability for vertical and/or horizontal use.

'S' indicates a leakage rate of less than 5 $m^3/hr/m^2$ (All ducts without an 'S' classification must have a leakage rate of less than 10 $m^3/hr/m^2$)

'500', '1 000', '1 500' indicate the suitability for use up to these values of pressure, measured at ambient.

Applies to	Single compartment smoke control dampers
Standard(s)	EN 13501-4; EN 1363-1, 3; EN 1366- 9, 10; EN 12101-8

Classification: —

E_{300}			30		60	90	120			
E_{600}			30		60	90	120			

Notes The classification is completed by the suffix 'single' to indicate suitability for single compartment use.

'HOT 400/30' (high operational temperature) indicates that the damper has the ability to be opened or closed during a period of 30 minutes under temperature conditions below 400 ºC (to be used only with E_{600} classification).

'v_{ed}', 'v_{ew}' 'v_{edw}' and/or 'h_{od}', 'h_{ow}' 'h_{odw}' indicate the suitability for vertical and/or horizontal use, together with mounting in a duct or in a wall or both respectively.

'S' indicates a leakage rate of less than 200 $m^3/hr/m^2$. All dampers without an 'S' classification must have a leakage rate of less than 360 $m^3/hr/m^2$. All damper less than 200 $m^3/hr/m^2$ take this value, all dampers between 200 $m^3/hr/m^2$ and 360 $m^3/hr/m^2$ take the 360 $m^3/hr/m^2$ value. Leakage rates are both at ambient and elevated temperatures.

'500', '1 000', '1 500' indicates the suitability for use up to at these values of under pressure, measured at ambient.

'AA' or 'MA' indicates automatic activation or manual intervention

'i→o', 'i ←o', 'i ↔o', indicates the performance criteria are satisfied from inside to outside, outside to inside or both respectively.

'C_{300}', 'C_{10000}', 'C_{mod}' indicates the suitability of the damper for use in smoke control only systems combined smoke control and environmental systems, or modulating dampers used in combined smoke control and environmental systems respectively.

Applies to	Multi-compartment fire resistant smoke control dampers
Standard(s)	EN 13501-4; EN 1363-1, 2, 3; EN 1366-2, 8, 10; EN 12101-8

Classification:

EI			30		60	90	120			
E			30		60	90	120			

Notes The classification is completed by the suffix 'multi' to indicate suitability for multi-compartment use.

'HOT 400/30' (high operational temperature) indicates that the damper has the ability to be opened or closed during a period of 30 minutes under temperature conditions below 400 ºC.

▼M1

'v_{ed}', 'v_{ew}' 'v_{edw}' and/or 'h_{od}', 'h_{ow}' 'h_{odw}' indicate the suitability for vertical and/or horizontal use, together with mounting in a duct or in a wall or both respectively.

'S' indicates a leakage rate of less than 200 $m^3/hr/m^2$. All dampers without an 'S' classification must have a leakage rate of less than 360 $m^3/hr/m^2$. All damper less than 200 $m^3/hr/m^2$ take this value, all dampers between 200 $m^3/hr/m^2$ and 360 $m^3/hr/m^2$ take the 360 $m^3/hr/m^2$ value. Leakage rates are both at ambient and elevated temperatures.

'500', '1 000', '1 500' indicates the suitability for use up to these values of pressure, measured at ambient.

'AA' or 'MA' indicates automatic activation or manual intervention

'i→o', 'i ←o', 'i ↔o', indicates that the performance criteria are satisfied from inside to outside, outside to inside or both, respectively.

'C_{300}', 'C_{10000}', 'C_{mod}' indicates the suitability of the damper for use in smoke control only systems, combined smoke control and environmental systems, or modulating dampers used in combined smoke control and environmental systems, respectively.

Applies to	Smoke barriers
Standard(s)	EN 13501-4; EN 1363-1, 2; EN 12101-1

Classification: D

D_{600}			30		60	90	120			A
DH			30		60	90	120			A

Notes 'A' can be any time over 120 minutes.

Applies to	Powered smoke and heat exhaust ventilators (fans), connecting joints
Standard(s)	EN13501-4; EN 1363-1; EN 12101-3; ISO 834-1

Classification: F

F_{200}							120			
F_{300}					60					
F_{400}						90	120			
F_{600}					60					
F_{842}			30							

Notes

Applies to	Natural smoke and heat exhaust ventilators
Standard(s)	EN 13501-4; EN 1363-1; EN 12101-2

Classification: B

B_{300}			30							
B_{600}			30							
B_{θ}			30							

Notes Where θ indicates the exposure condition (temperature).