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**COMMISSION DECISION**  
**of 17 January 2003**  
**establishing the classes of reaction-to-fire performance for certain construction products**

*(notified under document number C(2002) 4807)*

(Text with EEA relevance)

(2003/43/EC)

(OJ L 13, 18.1.2003, p. 35)

Amended by:

|  | Official Journal |      |          |
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| ► <u>M1</u> Commission Decision 2003/593/EC of 7 August 2003 | L 201            | 25   | 8.8.2003 |

Corrected by:

► C1 Corrigendum, OJ L 33, 8.2.2003, p. 44 (2003/43/EC)

**COMMISSION DECISION****of 17 January 2003****establishing the classes of reaction-to-fire performance for certain construction products***(notified under document number C(2002) 4807)***(Text with EEA relevance)**

(2003/43/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 <sup>(1)</sup>, as amended by Directive 93/68/EEC <sup>(2)</sup>, and in particular Article 20(2) thereof,

Whereas:

- (1) Directive 89/106/EEC envisages that in order to take account of the different levels of protection for construction works at national, regional or local level, it may be necessary to establish in the interpretative documents classes corresponding to the performance of products in respect of each essential requirement. Those documents have been published as the 'Communication of the Commission with regard to the interpretative documents of Council Directive 89/106/EEC <sup>(3)</sup>'.
- (2) With respect to the essential requirement of safety in the event of fire, interpretative document No 2 lists a number of interrelated measures which together define the fire safety strategy to be variously developed in the Member States.
- (3) Interpretative document No 2 identifies one of those measures as the limitation of the generation and spread of fire and smoke within a given area by limiting the potential of construction products to contribute to the full development of a fire.
- (4) The level of that limitation may be expressed only in terms of the different levels of reaction-to-fire performance of the products in their end-use application.
- (5) By way of a harmonised solution, a system of classes was adopted in Commission Decision 2000/147/EC of 8 February 2000 implementing Council Directive 89/106/EEC as regards the classification of the reaction-to-fire performance of construction products <sup>(4)</sup>.
- (6) In the case of certain wood-based panels, it is necessary to use the classification established in Decision 2000/147/EC.
- (7) The reaction-to-fire performance of many construction products and/or materials, within the classification provided for in Decision 2000/147/EC, is well established and sufficiently well known to fire regulators in Member States that they do not require testing for this particular performance characteristic.
- (8) The measures provided for in this Decision are in accordance with the opinion of the Standing Committee on Construction,

<sup>(1)</sup> OJ L 40, 11.2.1989, p. 12.

<sup>(2)</sup> OJ L 220, 30.8.1993, p. 1.

<sup>(3)</sup> OJ C 62, 28.2.1994, p. 1.

<sup>(4)</sup> OJ L 50, 23.2.2000, p. 14.

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HAS ADOPTED THIS DECISION:

*Article 1*

The construction products and/or materials which satisfy all the requirements of the performance characteristic 'reaction-to-fire' without need for further testing are set out in the Annex.

*Article 2*

The specific classes to be applied to different construction products and/or materials, within the reaction-to-fire classification adopted in Decision 2000/147/EC, are set out in the Annex to this Decision.

*Article 3*

Products shall be considered in relation to their end-use application, where relevant.

*Article 4*

This Decision is addressed to the Member States.

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## ANNEX

The tables set out in this annex list construction products and/or materials which satisfy all the requirements for the performance characteristic reaction to fire without need for testing.

Table 1

Classes of reaction-to-fire performance for wood-based panels <sup>(1)</sup>

| Wood-based panel products <sup>(2)</sup>                 | EN product grade reference | Minimum density (kg/m <sup>3</sup> ) | Minimum thickness (mm) | Class <sup>(3)</sup> (excluding floorings) | Class <sup>(4)</sup> Floorings |
|--|----------------------------|--------------------------------------|------------------------|--|--------------------------------|
| Particleboards   | EN 312                     | 600                                  | 9                      | D-s2, d0                                   | D <sub>FL</sub> -s1            |
| Fibreboards, Hard  | EN 622-2                   | 900                                  | 6                      | D-s2, d0                                   | D <sub>FL</sub> -s1            |
| Fibreboards, Medium                                      | EN 622-3                   | 600                                  | 9                      | D-s2, d0                                   | D <sub>FL</sub> -s1            |
|  |                            | 400                                  | 9                      | E, pass                                    | E <sub>FL</sub>                |
| Fibreboards, Soft  | EN 622-4                   | 250                                  | 9                      | E, pass                                    | E <sub>FL</sub>                |
| ► <b>C1</b> Fibreboards, MDF <sup>(5)</sup> ◀            | EN 622-5                   | 600                                  | 9                      | D-s2, d0                                   | D <sub>FL</sub> -s1            |
| ► <b>C1</b> Cement-bonded particleboard <sup>(6)</sup> ◀ | EN 634-2                   | 1 000                                | 10                     | B-s1, d0                                   | B <sub>FL</sub> -s1            |
| ► <b>C1</b> OSB board <sup>(7)</sup> ◀                   | EN 300                     | 600                                  | 9                      | D-s2, d0                                   | D <sub>FL</sub> -s1            |
| Plywood  | EN 636                     | 400                                  | 9                      | D-s2, d0                                   | D <sub>FL</sub> -s1            |
| Solid wood panels  | EN 13353                   | 400                                  | 12                     | D-s2, d0                                   | D <sub>FL</sub> -s1            |

<sup>(1)</sup> EN 13986

<sup>(2)</sup> Wood-based panels mounted without an air gap directly against class A1 or A2-s1, d0 products with minimum density 10 kg/m<sup>3</sup> or at least class D-s2, d0 products with minimum density 400 kg/m<sup>3</sup>.

<sup>(3)</sup> Class as provided for in Table 1 of the Annex to Decision 2000/147/EC.

<sup>(4)</sup> Class as provided for in Table 2 of the Annex to Decision 2000/147/EC.

<sup>(5)</sup> Dry process fibreboard.

<sup>(6)</sup> Cement content at least 75% by mass.

<sup>(7)</sup> Oriented strand board.

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Table 2

**Classes of reaction-to-fire performance of gypsum plasterboard products**

| Gypsum plasterboard                            | Nominal board thickness (mm) | Gypsum core                  |                        | Paper grammage <sup>(1)</sup> (g/m <sup>2</sup> ) | Class <sup>(2)</sup> (excluding floorings) |
|--|------------------------------|------------------------------|------------------------|---|--|
|  |                              | Density (kg/m <sup>3</sup> ) | Reaction to fire class |   |  |
| Conforming to EN 520 (except perforated board) | ≥ 9,5                        | ≥ 600                        | A1                     | ≤ 220   | A2-s1, d0                                  |
|  | ≥ 12,5                       | ≥ 800                        |                        | > 220 ≤ 300                                       | B-s1, d0                                   |

<sup>(1)</sup> Determined according to EN ISO 536 and with no more than 5 % organic additive content.

<sup>(2)</sup> Classes as provided for in Table 1 of the Annex to Decision 2000/147/EC.

**Note: End Use Application**

The gypsum plasterboards shall be mounted and fixed using one of the two following methods:

**(a) Mechanically fixed to a supporting substructure**

The boards, or (in the case of multi-layer systems) at least the outermost layer of boards, shall be mechanically fixed to a metal substructure (made from components detailed in EN 14195) or a timber substructure (in accordance with EN 336 and ENV 1995-5).

When the substructure provides supporting members in one direction only, the maximum span between the supporting members shall not exceed a dimension equal to 50 times the thickness of the boards. When the substructure includes supporting members in two directions the maximum span in either direction shall not exceed a dimension equal to 100 times the thickness of the boards.

The mechanical fixings shall be screws or nails, which shall be fixed through the thickness of the boards into the substructure at centres not exceeding 300 mm measured along the length of each supporting member.

All joints between adjoining boards shall be fully filled with jointing compound as specified in EN 13963.

The cavity formed behind the boards by the substructure may provide an air space, or may be filled with an insulating material with a reaction to fire classification of at least class A2-s1, d0.

**(b) Directly fixed or bonded to a solid substrate (dry lining system)**

The boards shall be fixed directly to a solid substrate with a reaction to fire classification of at least class A2-s1, d0.

The boards may be fixed using screws or nails fixed through the thickness of the boards into the solid substrate or may be bonded to the substrate using 'dabs' of gypsum based adhesive compound. In either case the screw or nail fixings or the adhesive 'dabs' shall be positioned at maximum 600 mm vertical and horizontal centres.

All joints between adjoining boards shall be fully filled with jointing compound as specified in EN 13963.

▼ **M1**

Table 3

**Classes of reaction-to-fire performance of high-pressure decorative laminate panels**

| High pressure decorative laminate panels <sup>(1)</sup>                              | Product detail   | Minimum density (kg/m <sup>3</sup> )                             | Minimum overall thickness (mm)                               | Class <sup>(2)</sup> (excluding floorings) |
|--|--|--|--|--|
| Interior grade non-FR Compact HPL panels <sup>(3)</sup>                              | Compact HPL meeting EN 438-4 type CGS  | 1 350  | 6  | D-s2, d0                                   |
| Interior grade non-FR HPL composite panels with wood-based substrates <sup>(3)</sup> | Composite panels comprising non-FR grade HPL meeting the requirements of EN 438-3, adhesively bonded to both sides of non-FR grade wood-based core of minimum thickness 12 mm complying with EN 13986, using PVAc or thermosetting adhesive at an application rate of 60 to 120 g/m <sup>2</sup> | Wood-based core minimum density 600<br>HPL minimum density 1 350 | 12 mm wood-based core with HPL ≥ 0,5 mm bonded to both sides | D-s2, d0                                   |

<sup>(1)</sup> Either directly fixed (i.e. with no air gap) to a material having a reaction to fire of A2-s1, d0 or better and a density of at least 600 kg/m<sup>3</sup>, or mounted on a timber or metal batten support frame, with a non-ventilated (i.e. void open only at the top) air gap of at least 30 mm, the reverse face of the cavity so formed having a reaction to fire classification of A2-s1, d0 or better.

<sup>(2)</sup> Classes as provided for in Table 1 of the Annex to Decision 2000/147/EC.

<sup>(3)</sup> Complying with European Standard EN 438-7.

▼ **M1**

Table 4

**Classes of reaction-to-fire performance of structural timber products <sup>(1)</sup>**

|                   | Product detail  | Minimum mean density <sup>(2)</sup><br>(kg/m <sup>3</sup> ) | Minimum overall thickness<br>(mm) | Class <sup>(2)</sup><br>(excluding floorings) |
|-------------------|---|---|-----------------------------------|---|
| Structural timber | Visual and machine graded structural timber with rectangular cross-sections shaped by sawing, planing or other methods or with round cross-sections | 350   | 22                                | D-s2, d0                                      |

<sup>(1)</sup> Applies to all species covered by the product standards.

<sup>(2)</sup> Classes as provided for in Table 1 of the Annex to Decision 2000/147/EC.

<sup>(3)</sup> Conditioned according to EN 13238.