

## PERFORMANCE OF MATERIALS, PRODUCTS AND STRUCTURES

**B**

**Table A6 Use and definitions of non-combustible materials**

References in AD B guidance to situations where such materials should be used	Definitions of non-combustible materials	
	National class	European class
<ol style="list-style-type: none"> <li>refuse chutes meeting the provisions in the guidance to B3, paragraph 6.34c.</li> <li>suspended ceilings and their supports where there is provision in the guidance to B3, paragraph 9.12, for them to be constructed of non-combustible materials.</li> <li>pipes meeting the provisions in the guidance to B3, Table 14.</li> <li>flue walls meeting the provisions in the guidance to B3, Diagram 39.</li> <li>construction forming car parks referred to in the guidance to B3, paragraph 11.3.</li> </ol>	<ol style="list-style-type: none"> <li>Any material which when tested to BS 476-11:1982 does not flame nor cause any rise in temperature on either the centre (specimen) or furnace thermocouples</li> <li>Totally inorganic materials such as concrete, fired clay, ceramics, metals, plaster and masonry containing not more than 1% by weight or volume of organic material. (Use in buildings of combustible metals such as magnesium/aluminium alloys should be assessed in each individual case).</li> <li>Concrete bricks or blocks meeting BS EN 771-3:2003</li> <li>Products classified as non-combustible under BS 476-4:1970</li> </ol>	<ol style="list-style-type: none"> <li>Any material classified as class A1 in accordance with BS EN 13501-1:2007 <i>Fire classification of construction products and building elements, Part 1 – Classification using data from reaction to fire tests.</i></li> <li>Products made from one or more of the materials considered as Class A1 without the need for testing as defined in Commission Decision 2003/424/EC of 6th June 2003 amending Decision 96/603/EC establishing the list of products belonging to Classes A1 "No contribution to fire" provided for in the Decision 94/611/EC implementing Article 20 of the Council Directive 69/106/EEC on construction products. None of the materials shall contain more than 1% by weight or volume (whichever is the more onerous) of homogeneously distributed organic material.</li> </ol>
<p><b>Note:</b> The National classifications do not automatically equate with the equivalent classifications in the European column, therefore products cannot typically assume a European class unless they have been tested accordingly.</p>		

**B**

## PERFORMANCE OF MATERIALS, PRODUCTS AND STRUCTURES

**Table A7 Use and definitions of materials of limited combustibility**

References in AD B guidance to situations where such materials should be used	Definitions of materials of limited combustibility	
	National class	European class
<ol style="list-style-type: none"> <li>stairs where there is provision in the guidance to B1 for them to be constructed of materials of limited combustibility (see 5.19).</li> <li>materials above a suspended ceiling meeting the provisions in the guidance to B3, paragraph 9.12.</li> <li>reinforcement/support for fire-stopping referred to in the guidance to B3, see 10.18.</li> <li>roof coverings meeting provisions: <ol style="list-style-type: none"> <li>in the guidance to B3, paragraph 8.29; or</li> <li>in the guidance to B4, Table 16 or</li> <li>in the guidance to B4, Diagram 47.</li> </ol> </li> <li>roof deck meeting the provisions of the guidance to B3, Diagram 30a.</li> <li>class 0 materials meeting the provisions in Appendix A, paragraph 13(a).</li> <li>ceiling tiles or panels of any fire protecting suspended ceiling (Type Z) in Table A3.</li> <li>Insulation material in external wall construction referred to in paragraph 12.7.</li> <li>Insulation above any fire-protecting suspended ceiling (Type Z) in Table A3.</li> </ol>	<ol style="list-style-type: none"> <li>Any non-combustible material listed in Table A6.</li> <li>Any material of density 300kg/m<sup>3</sup> or more, which when tested to BS 476-11:1982, does not flame and the rise in temperature on the furnace thermocouple is not more than 20°C.</li> <li>Any material with a non-combustible core at least 6mm thick having combustible facings (on one or both sides) not more than 0.5mm thick. (Where a flame spread rating is specified, these materials must also meet the appropriate test requirements).</li> <li>Any material of density less than 300kg/m<sup>3</sup>, which when tested to BS 476-11:1982, does not flame for more than 10 seconds and the rise in temperature on the centre (specimen) thermocouple is not more than 35°C and on the furnace thermocouple is not more than 25°C.</li> </ol>	<ol style="list-style-type: none"> <li>Any material listed in Table A6.</li> <li>Any material/product classified as Class A2-s3, d2 or better in accordance with BS EN 13501-1:2007 <i>Fire classification of construction products and building elements, Part 1 – Classification using data from reaction to fire tests.</i></li> </ol>
<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>The National classifications do not automatically equate with the equivalent classifications in the European column; therefore, products cannot typically assume a European class unless they have been tested accordingly.</li> <li>When a classification includes "s3, d2", this means that there is no limit set for smoke production and/or flaming droplets/particles.</li> </ol>		

## Read 12.7 (Very Important)

unprotected, the rafter members of the frame, as well as the column members, may need to be fire protected.

### External surfaces

12.6 The external surfaces of walls should meet

## B4 CONSTRUCTION OF EXTERNAL WALLS

the provisions in Diagram 40. Where a mixed use building includes Assembly and Recreation Purpose Group(s) accommodation, the external surfaces of walls should meet the provisions in Diagram 40c.

### Insulation Materials/Products

12.7 In a building with a storey 18m or more above ground level any insulation product, filler material (not including gaskets, sealants and similar) etc. used in the external wall construction should be of limited combustibility (see Appendix A). This restriction does not apply to masonry cavity wall construction which complies with Diagram 34 in Section 9.

### Cavity barriers

12.8 Cavity barriers should be provided in accordance with Section 9.

12.9 In the case of a an external wall construction, of a building which, by virtue of paragraph 9.10d (external cladding system with a masonry or concrete inner leaf), is not subject to the provisions of Table 13 *Maximum dimensions of cavities in non-domestic buildings*, the surfaces which face into cavities should also meet the provisions of Diagram 40.

Diagram 40 Provisions for external surfaces or walls

See paras 12.5 and 12.8

