

Geregistreeerde Belgische norm

NBN EN 1992-1-2

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Normklasse: B 15

Eurocode 2: Ontwerp en berekening van betonconstructies - Deel 1-2: Algemene regels - Ontwerp en berekening van constructies bij brand

Eurocode 2: Calcul des structures en béton - Partie 1-2: Règles générales - Calcul du comportement au feu
Eurocode 2: Design of concrete structures - Part 1-2: General rules - Structural fire design

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Deze Europese norm EN 1992-1-2: 2004 heeft de status van een Belgische norm.

Deze Europese norm bestaat in drie officiële versies (Duits, Engels, Frans).

Deze norm is onbruikbaar zonder de bijlage die de nationale parameters bepaalt.



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5.4 Walls

5.4.1 Non load-bearing walls (partitions)

(1) Where the fire resistance of a partition is only required to meet the thermal insulation criterion I and integrity criterion E, the minimum wall thickness should not be less than that given in Table 5. 3. The requirements for axis distance do not apply for such situations

(2) If calcareous aggregates are used the minimum wall thickness given in Table 5. 3 may be reduced by 10%.

(3) To avoid excessive thermal deformation and subsequent failure of integrity between wall and slab, the ratio of clear height of wall to wall thickness should not exceed 40.

Table 5.3: Minimum wall thickness of non load-bearing walls (partitions)

Standard fire resistance	Minimum wall thickness (mm)
1	2
EI 30	60
EI 60	80
EI 90	100
EI 120	120
EI 180	150
EI 240	175

5.4.2 Load-bearing solid walls

(1) Adequate fire resistance of load-bearing reinforced concrete walls may be assumed if the data given in Table 5.4 and the following rules are applied.

(2) The minimum wall thickness values given in Table 5.4 may also be used for plain concrete walls (see EN 1992-1-1, Section 12).

(3) 5.4.1 (2) and (3) also apply for load-bearing solid walls.

Table 5.4: Minimum dimensions and axis distances for load-bearing reinforced concrete walls

Standard fire resistance	Minimum dimensions (mm)			
	Wall thickness/axis distance for			
	$\mu_{fi} = 0,35$		$\mu_{fi} = 0,7$	
	wall exposed on one side	wall exposed on two sides	wall exposed on one side	wall exposed on two sides
1	2	3	4	5
REI 30	100/10*	120/10*	120/10*	120/10*
REI 60	110/10*	120/10*	130/10*	140/10*
REI 90	120/20*	140/10*	140/25	170/25
REI 120	150/25	160/25	160/35	220/35
REI 180	180/40	200/45	210/50	270/55
REI 240	230/55	250/55	270/60	350/60
* Normally the cover required by EN 1992-1-1 will control.				
Note: For the definition of μ_{fi} see 5.3.2 (3).				

5.4.3 Fire walls

(1) Where a fire wall has to comply with an impact resistance requirement (criterion M, see 2.1.2 (6)), in addition to 5.4.1 or 5.4.2, the minimum thickness for normal weight concrete should not be less than:

- 200 mm for unreinforced wall
- 140 mm for reinforced load-bearing wall
- 120 mm for reinforced non load bearing wall

and the axis distance of the load-bearing wall should not be less than 25 mm.

5.5 Tensile members

(1) Fire resistance of reinforced or prestressed concrete tensile members may be assumed adequate if the values given in Table 5.5 and the following rules are applied.

(2) Where excessive elongation of a tensile member affects the load bearing capacity of the structure it may be necessary to reduce the steel temperature in the tensile member to 400°C. In such situations the axis distances in Table 5.5 should be increased by using Expression (5.3)