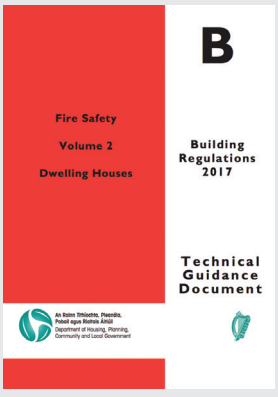
# FIRE PART B




## PART B AMENDMENT NEW TECHNICAL GUIDANCE

- ENHANCED REQUIREMENTS FOR EARLY DETECTION AND WARNING
- IMPROVED PROTECTION FOR OCCUPIERS OF DWELLING HOUSES
- NEW FIRE SAFETY REQUIREMENTS FOR COMMUNITY DWELLING HOUSES
- PROVISION OF SPECIFIC TGD FOR DWELLING HOUSES
- COMPLIANCE WITH, AND REFERENCE TO, NEW EUROPEAN STANDARDS
- MODIFIED GUIDANCE TO ALIGN WITH CHANGES IN STANDARDS AND BUILDING PRACTICES
- DESIGNATION OF NEW PURPOSE GROUPS 1(A), 1(B) & 1(D)

## PART B AMENDMENT TGD B 2006 PURPOSE GROUPS

**1(c)** Flat or maisonette

**2(a)** Hospital, nursing home for old people or children

**2(b)** Hotel Hostel guest building etc.

**3** Office

**4(a)** Shop

**5** Assembly and recreation

TGD B 2006/2018

Fire Safety Volume 1 Building other than Dwelling Houses coming Early 2019

## EUROPEAN CONCRETE PLATFORM

***Summary of unprotected construction materials performance in fire***

| Unprotected construction material | Fire resistance | Combusti-bility | Contribution to fire load | Rate of temperature rise across a section | Built-in fire protection | Repairability after the fire | Protection for evacuees and fire-fighters |
|---|---|---|---|---|---|---|---|
| Timber | Low | High | High | Very low | Very low | Nil | Low |
| Steel | Very low | Nil | Nil | Very high | Low | Low | Low |
| Concrete | High | Nil | Nil | Low | High | High | High |

Table ref: European Concrete Platform 2007

# CONCRETE & CONCRETE MASONRY

- Does not burn, and does not add to the fire load
- Has high resistance to fire, and stops fire spreading
- Has an effective fire shield, providing safe means of escape for occupants and protection for firefighters
- Does not produce smoke or toxic gases, so helps reduce the risk to occupants
- Does not drip molten particles, which can spread the fire
- Restricts a fire, and so reduces the risk of environmental pollution
- Provides built-in fire protection
- Can resist extreme fire conditions, making it ideal for storage premises with a high fire Load
- Concrete's robustness in fire facilitates firefighting and reduces the risk of structural collapse
- Is easy to repair after a fire, and so helps businesses recover sooner
- Is not affected by the water used to quench a fire
- Pavements stand up to the extreme fire conditions encountered in tunnels

# DESIGN

NSAI Standards

**Irish Standard**
**I.S EN**

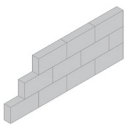
**Eurocode 6 - Design of masonry structures - Part 1-2: General rules - Structural fire design (Including Irish National Annex)**

Fire ratings for masonry walls are taken from Eurocode 6 I.S. EN 1996-1-2

The fire rating on dense aggregate concrete blocks is Class A1, i.e. the blocks does not burn as it has no carbon or organic matter

Block strength does not come into consideration with fire ratings as density and thickness are the limiting factors mortar.

Refer to tables NA 3.1, 3.2 & 3.6 in the Irish National Annex.

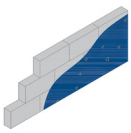


***100mm Solid – Group 1***

***Separating Non Loadbearing 4 hours***

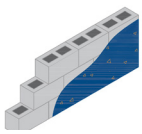
***215mm Cavity – Group 2***

***Separating Non Loadbearing 4 hours***



***100mm Solid – Group 1 + Plaster***

***Separating Non Loadbearing 4 hours***

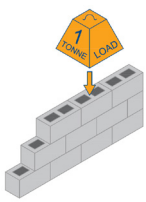


***215mm Cavity – Group 2 + Plaster***

***Separating Non Loadbearing 4 hours***


***100mm Solid – Group 1***

***Separating Loadbearing 2 hours***




***215mm Cavity – Group 2***

***Separating Loadbearing 4 hours***


***100mm Solid – Group 1 + Plaster***

***Separating Loadbearing 4 hours***


***215mm Cavity – Group 2 + Plaster***

***Separating Loadbearing 4 hours***

**www.roadstone.ie**

**Phone:** 01 404 1200
**Email:** info@roadstone.ie

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