



**National Standards Authority of Ireland**

**IRISH STANDARD**

**I.S. 189:1974**

ICS 91.100.25

**CONCRETE BUILDING BRICKS**

National Standards  
Authority of Ireland  
Glasnevin, Dublin 9  
Ireland

Tel: +353 1 807 3800  
Fax: +353 1 807 3838  
<http://www.nsai.ie>

**Sales**

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**DECLARATION**  
**OF**  
**SPECIFICATION**  
**ENTITLED**  
**CONCRETE BUILDING BRICKS**  
**AS**  
**THE IRISH STANDARD SPECIFICATION FOR**  
**CONCRETE BUILDING BRICKS**

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The Institute for Industrial Research and Standards in exercise of the power conferred by section 20 of the Industrial Research and Standards Act, 1961 (No. 20 of 1961), and with the consent of the Minister for Industry and Commerce hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Concrete Building Bricks) Declaration, 1974.

2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for **Concrete Building Bricks**.

(2) The said standard specification may be cited as **Irish Standard 189:1974** or as **I.S.189:1974**.

## SCHEDULE

### Concrete Building Bricks

#### 1. SCOPE

This specification covers precast solid, perforated, hollow and cellular concrete building bricks made with the materials specified in Clauses 4, 5 and 6. The specification is divided into three parts as follows:—

Part 1: Concrete bricks—General requirements.

Part 2: Fixing bricks.

Part 3: Facing bricks.

Note: Recommendations on the use of concrete bricks are included in Appendix E.

#### PART 1. CONCRETE BRICKS—GENERAL REQUIREMENTS

##### 2. DEFINITIONS

For the purposes of this specification the following definitions apply:—

2.1 *Brick*. A walling unit not exceeding 338 mm in length, 225 mm in width or 150 mm in height, the unit being solid, perforated, hollow or cellular as defined in 2.2 to 2.5 below.

2.2 *Solid brick*. In which small holes passing through, or nearly through, the brick do not exceed 25% of its volume, or in which frogs (depressions in the bed faces of a brick) do not exceed 20% of its volume. The holes shall be so disposed that the aggregate thickness of solid material when measured horizontally across the width or length of the brick at right angles to the faces shall nowhere be less than 30% of the overall width or length of the brick. The area of any one hole shall not exceed 3000 mm<sup>2</sup>.

2.3 *Perforated brick*. In which small holes (as defined in 2.2 above) passing through the brick exceed 25% of its volume. The holes shall be so disposed that the aggregate thickness of solid material when measured horizontally across the width of the brick at right angles to the faces shall nowhere be less than 30% of the overall width of the brick. The area of any one hole shall not exceed 3000 mm<sup>2</sup>.

2.4 *Hollow brick*. In which holes passing through the brick exceed 25% of its volume there being no limitation on the size of the holes.

2.5 *Cellular brick*. In which holes closed at one end exceed 20% of the volume of the brick.

**2.6 Co-ordinating size.** The size of the space allocated for the brick, including allowance for joints and tolerances. (See Notes to Users, 'Bricks in the context of modular co-ordination').

**2.7 Work size.** The size of a brick specified for its manufacture and to which the actual size should conform subject to specified tolerances. (See Clause 7).

**2.8** No part of any frog, hole, or perforation shall be within 15 mm of any edge of any brick.

### 3. CLASSIFICATION

**Note:** The manufacturer when designating bricks shall state whether strength was determined by testing bricks on face or on bed.

Bricks may be one of the following strength categories:-

*Average compressive strength*

N/mm <sup>2</sup>						
7.0	10.0	15.0	20.0	30.0	35.0	40.0

The purchaser shall specify in his enquiry and order the strength category of brick required, as defined above, and indicate whether the bricks are to be laid on face or on bed.

### 4. CEMENT

The cement used in the manufacture of the bricks shall conform to the provisions of Irish Standard 1, 'Portland Cement'.

### 5. AGGREGATES

The aggregates at the mixer shall be clean and free from deleterious matter and shall be natural aggregates complying with the requirements of Irish Standard 5, 'Aggregates for Concrete'.

**Note:** It is not possible to specify precisely the quality of water. Water of drinking quality free from matter harmful to concrete, to reinforcement or to ties used in brickwork construction should be suitable.

### 6. ADDITIVES OR ADMIXTURES

**6.1** Additives or admixtures may be used either as additives to the cement during manufacture, or as admixtures to the concrete mix. Their quality and proportions shall be such as to have no deleterious effect on the finished product. Additives or admixtures may be:

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