

**IRISH STANDARD SPECIFICATION**

**WATER-CLOSET CISTERNS  
FOR DOMESTIC USE**

**I.S. 70 : 1980**

***Price £3.20***

**INSTITUTE FOR INDUSTRIAL RESEARCH AND STANDARDS**

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**DECLARATION**  
**OF**  
**SPECIFICATION**  
**ENTITLED**  
**WATER-CLOSET CISTERNS FOR DOMESTIC USE**  
**AS**  
**THE IRISH STANDARD SPECIFICATION FOR**  
**WATER-CLOSET CISTERNS FOR DOMESTIC USE**

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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, Commerce and Tourism hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Water-Closet Cisterns for Domestic Use) Declaration, 1980.
2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for Water-Closet Cisterns for Domestic Use.  
(2) The said standard specification may be cited as Irish Standard 70:1980 or as I.S. 70:1980.
3. (1) The Standard Specification (Water-Closet Cisterns for Domestic Use), 1958, is hereby revoked.  
(2) Reference in any other standard specification to the Instrument hereby revoked and to Irish Standard 70:1958 thereby prescribed shall be construed, respectively, as references to this Instrument and to Irish Standard 70:1980.

## SCHEDULE

# Water-Closet Cisterns for Domestic Use

## 1. GENERAL

### 1.1 Scope

This specification covers the requirements for valveless siphonic W.C. flushing cisterns of 9 litres nominal capacity for both high level and low level positions, together with the necessary flush pipes.

Cisterns may be of the type which flushes 9 litres only (i.e. the single flush type), or of the type which flushes, as selected, either 4.5 litres or 9 litres (i.e. the dual flush type).

*Note:* Dual flush type cisterns are intended for use with washdown pans.

### 1.2 Definitions

For the purposes of this specification the following definitions apply:

#### 1.2.1 *Spill-over level*

The level at which water in the flushing cisterns will first spill over if the rate of inflow exceeds the rate of outflow through the warning pipe.

#### 1.2.2 *Warning pipe*

An overflow pipe so fixed that its outlet, whether inside or outside a building, is in a conspicuous position where the discharge of any water therefrom can be readily seen.

#### 1.2.3 *Water-line*

A line marked inside the cistern to indicate the highest water level at which the ballvalve should be adjusted to shut off.

### 1.3 Workmanship

Cisterns and flush pipes shall be free from manufacturing faults and other defects affecting their utility. Any working parts shall operate smoothly and efficiently.

### 1.4 Manufacturer's certificate

The purchaser shall be entitled on request to a certificate from the supplier confirming that the cistern complies with the provisions of this specification and is capable of passing the test requirements given in 2.6 and 2.7 and, if appropriate, in 2.2.3.6

### 1.5 Inspection

The purchaser or his representative, if he so requires, shall be granted facilities for the purpose of inspection of finished goods prior to delivery.

### 1.6 Marking

Cisterns which are manufactured in compliance with the requirements of this specification shall be clearly and indelibly marked with the following:—

- (i) the manufacturer's name or identification mark;
- (ii) the inscription "I.S. 70:1980";
- (iii) the wording specified in 3.2.2 on dual flush type cisterns.

The marks required in (i) and (ii) shall be capable of being seen after the installation of the cistern and before any cover is fitted.

*Note 1:* The mark I.S. 70 on or in relation to the product is a claim by the manufacturer that it complies with the requirements of the standard.

*Note 2:* The mark I.S. 70 on a cistern, with or without the certification mark, in no way refers to the suitability or otherwise of any ballvalve or float fitted in the cistern.

## 2. MATERIALS AND DESIGN

### 2.1 General

Cistern shells, siphons and associated components shall be made from materials which under the conditions of use are non-corroding. All materials used shall be water resistant and suitable in their application to such an extent that the durability and efficiency of the cistern remains unaffected.

Before dissimilar metals are used in the construction of a cistern the manufacturer shall pay due regard to the need for avoiding the possibility of electrolytic action.

### 2.2 Requirements for particular materials

When the following materials are used in the construction of cisterns they shall comply with the following requirements:

#### 2.2.1 *Ceramic ware cisterns*

The shell thickness of fireclay, stoneware and other ceramic ware cisterns, except vitreous china cisterns, shall be not less than 12mm; the shell thickness of vitreous china cisterns shall be not less than 10mm; vitreous china cisterns shall comply with the requirements of British Standard 3402: Quality of vitreous china sanitary appliances, published by the British Standards Institution, 2 Park Street, London W1A 2BS.

#### 2.2.2 *Composition cisterns*

The shell thickness of asbestos filled or fibre filled bitumen composition cisterns shall be not less than 12mm, and all internal corners shall be rounded or chamfered.

#### 2.2.3 *Rubber compound and plastics cisterns*

Plastics materials and rubber compounds shall be such that, when assembled, the cistern shall comply with the following requirements:

##### 2.2.3.1 *Appearance*

The surface of the cistern shall be free from blisters and delamination, and reasonably free from flow lines, streaking or colour variations.

##### 2.2.3.2 *Colour fastness to light*

The colour fastness to light of the cistern and cover shall be not less than 5 when determined by the method described in Appendix C.

##### 2.2.3.3 *Opacity*

The cistern and cover shall be opaque to light.

##### 2.2.3.4 *Distortion resistance*

The cistern, when tested as described in Appendix D, shall not bulge more than 6mm and the cover shall not be dislodged.

##### 2.2.3.5 *Dead load test*

The complete cistern, when installed and filled as described in Appendix D, and tested by the application of a dead load of 23kg applied 6mm from the end of the operating lever arm for 30 s, shall not distort to such an extent that any part becomes detached. Thirty seconds after the load is removed the function and appearance of the cistern shall not be impaired.

##### 2.2.3.6 *Front thrust test*

The complete cistern, when installed and filled as described in Appendix D and tested by the method described in Appendix E, shall not distort to such an extent as to be inoperable or unsightly when the load is removed. This test applies only to cisterns for use at low levels.

##### 2.2.3.7 *Impact test*

The complete cistern, when installed and filled as described in Appendix D and tested as described in Appendix F, shall show no defect after one impact and after being emptied shall show no defect after one more impact.

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