

SINGAPORE STANDARD

SS 378 : 1996

(ICS 91.140.70)

SPECIFICATION FOR

**Low capacity WC flushing
cisterns up to 4.5 L maximum**

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SINGAPORE STANDARD

**SPECIFICATION FOR LOW CAPACITY
WC FLUSHING CISTERNS UP TO 4.5 L MAXIMUM**

FOREWORD

This Singapore Standard was prepared by the Technical Committee on Building Services under the direction of the Building Materials Product Standards Committee.

The principal objective of this Singapore Standard is to stipulate the quality required of low capacity WC flushing cisterns (up to 4.5 L maximum) that are used in the local building context. This Singapore Standard should be used in conjunction with SS 379 : 1996 'Specification for vitreous china WC pans for use with low capacity WC flushing cisterns up to 4.5 L maximum'.

In preparing this standard, references were made to the following standards:

- | | | |
|-----|------------------|---|
| (a) | BS 1125 : 1987 | Specification for WC flushing cisterns (including dual flush cisterns and flush pipes) |
| (b) | BS 1212 : | Float operated valves
Part 4 : 1991 Specification for compact type float operated valves for WC flushing cisterns (including floats) |
| (c) | BS 7357 : 1990 | Specification for 7.5 L WC flushing cisterns |
| (d) | BS 7358 : 1990 | Specification for close coupled suites with flush capacity of 7.5 L maximum |
| (e) | SABS 821 : 1990 | Standard specification for WC flushing cisterns |
| (f) | SABS 1509 : 1990 | Standard specification for flushing devices for WC flushing cisterns |
| (g) | SS 68 : 1984 | Specification for WC flushing cisterns, including dual flush cisterns and flush pipes. |

Acknowledgement is made for the use of information from the above overseas standards.

NOTE

1. Singapore Standards are subject to periodical review to keep abreast of technological changes and new technical developments. The revisions of Singapore Standards are announced through the issue of either amendment slips or revised editions.
2. Compliance with a Singapore Standard does not exempt users from legal obligations.

1. SCOPE

This Singapore Standard specifies requirements for 4.5 L maximum single flush, exposed and concealed WC flushing cisterns with a side inlet or bottom inlet supplied with a float-operated valve, with either a siphon type or valve type flushing device, for high level, low level, and close coupled applications together with the necessary flush pipes.

2. DEFINITIONS

For the purpose of this Singapore Standard, the following definitions shall apply:

- 2.1 Close Coupled Cistern.** A cistern connected directly to a pan that has an integral waterway.
- 2.2 High-level Cistern.** A cistern situated more than 1.5 m (nominally) above the rim of a WC pan and connected to the pan by means of a flush pipe.
- 2.3 Low-level Cistern.** A cistern situated in close proximity to the pan and connected thereto by means of a short flush pipe.
- 2.4 Concealed Cistern.** A cistern that is not normally visible after installation.
- 2.5 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.
- 2.6 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.
- 2.7 Water Line.** A line marked inside the cistern to indicate the highest water level at which the float operated valve should be adjusted to shut off.

3. WORKMANSHIP

All components shall be soundly constructed of first-quality materials throughout and shall be free from manufacturing faults and other defects affecting their utility. All working parts shall operate smoothly and efficiently.

The cistern and cover shall have rounded edges. No parts of the cistern shall have unduly sharp points that are liable to cause harmful cut to the user.

4. MATERIALS AND DESIGN

4.1 General. Cistern shells, flushing devices, and associated components shall be made from materials which under the conditions of use are either:

- (a) non-corroding e.g. plastics; or
- (b) protected against the types of corrosion caused by the action on them of the water with which the cistern is to be used; or
- (c) highly resistant to corrosion by the action of the water with which the cistern is to be used, i.e. they corrode only at a rate which is insufficient to affect adversely the durability or efficiency of the cistern.