TEST CODE SHEET

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1. TYPE OF TEST(S)

Liquid contaminant, dye retention.

2. WATER REGULATIONS REQUIREMENTS FOR FITTINGS

Schedule 2

25 (1) Subject to the following provisions of this paragraph

(a) every water closet pan shall be supplied with water from a flushing cistern, pressure flushing cistern or pressure flushing valve, and shall be so made and installed that after normal use its contents can be cleared effectively by a single flush, or, where the installation is designed to receive flushes of different volumes, by the largest those flushes;

(b) no pressure flushing valve shall be installed
(i) in a house, or
(ii) in any building not being a house where a minimum flow rate of 1.2 litres per second cannot be achieved at the appliance.

(c) where a pressure flushing valve is connected to a supply pipe or distributing pipe, the flushing arrangement shall incorporate a backflow prevention device consisting of a permanently vented pipe interrupter located not less than 300mm above the spillover level of the WC pan or urinal;

(d) no flushing device installed for use with a WC pan shall give a single flush exceeding 6 litres;

(e) no flushing device designed to give flushes of different volumes shall have a lesser flush exceeding two-thirds of the largest flush volume;

(f) every flushing cistern, other than a pressure flushing cistern, shall be clearly marked internally with an indelible line to show the intended volume of flush, together with an indication of that volume.

(g) a flushing cistern designed to give flushes of different volumes
(i) shall have a readily discernible method of actuating the flush of different volumes; and
(ii) shall have instructions, clearly and permanently marked on the cistern or displayed nearby, for operating it to obtain the different volumes of flush

(h) every flushing cistern, not being a pressure flushing cistern or a urinal cistern, shall be fitted with a warning pipe or with a no less effective device;
(i) every urinal that is cleared by water after use shall be supplied with water from a flushing device which
(ii) in the case of a flushing cistern, is filled at a rate suitable for the installation;
(iii) in all cases, is designed or adapted to supply no more water than is necessary for effective flow over the internal surface of the urinal and for replacement of the fluid in the trap; and

(j) except in the case of a urinal which is flushed manually, or which is flushed automatically by electronic means after use, every pipe which supplies water to a flushing cistern or trough used for flushing a urinal shall be fitted with an isolating valve controlled by a time switch and a lockable isolating valve, or with some other equally effective automatic device for regulating the periods during which the cistern may fill.

(2) Every water closet, and every flushing device designed for use with a water closet, shall comply with a specification approved by the regulator for the purposes of this schedule.

(3) The requirements of the sub-paragraphs (1) and (2) do not apply where faeces or urine are disposed of through an appliance that does not solely use fluid to remove the contents.

(4) The requirement in sub-paragraph (1) (i) shall be deemed to satisfied

(a) in the case of an automatically operated flushing cistern servicing urinals which is filled with water at a rate not exceeding

(i) 10 litres per hour for a cistern serving a single urinal;
(ii) 7.5 litres per hour per urinal bowl or stall, or as the case may be, for each 700mm width of urinal slab, for a cistern serving two or more urinals;

(b) in the case of a manually or automatically operated pressure flushing valve used for a flushing urinals which delivers not more than 1.5 litres per bowl or position each time the device is operated.

(5) Until 1 January 2001 paragraphs (1) (a) and (d) shall have effect as if they provided as follows

(a) every water closet pan shall be supplied with water from a flushing cistern or trough of the valveless type which incorporates siphonic apparatus;

(b) no flushing device installed for use with a WC pan shall give a single flush exceeding 7.5 litres.

(6) Notwithstanding sub-paragraph 1(d), a flushing cistern installed before 1st July 1999 may be replaced by a cistern which delivers a similar volume and which may be either single flush or dual flush; but a single flush cistern may not be so replaced by a double flush cistern.

(7) In this paragraph

'PRESSURE FLUSHING CISTERN' means a WC Flushing device that utilises the pressure of water within the cistern supply pipe to compress air and increase the pressure of water available for flushing a WC pan.

'PRESSURE FLUSHING VALVE' means a self closing valve supplied with water directly from a supply pipe or a distributing pipe which when activated will discharge a pre determined flush volume.

'TRAP' means a pipe fitting or part of a sanitary appliance, that retains liquid to prevent the passage of foul air; and

'WARNING PIPE' means an overflow pipe whose outlet is located in a position where the discharge of water can be readily seen.

3. BRITISH STANDARDS OR WATER SPECIFICATION, DEEMED TO SATISFY WATER REGULATIONS REQUIREMENTS

3.1 None.

4. TEST PROCEDURE

Note: Unless stated otherwise the temperature of the test fluid shall be 20 ± 10ºC.

4.1 Tests are applicable to the following fittings:

ALL WC CISTERNS AND PANS SUPPLIED AS SUITES, which require to be tested to the regulators specification.

(A) ALL WC CISTERNS AND PANS SUPPLIED AS SUITES, which require to be tested to the regulators specification.

4.2 Apparatus

a) WC pan with associated flushing cistern and/or flushing device, or a close coupled/one-piece suite, all meeting the appropriate requirements of this standard, installed in accordance with the manufacturer's instructions on a firm, flat horizontal/vertical surface as appropriate. The flushing device and cistern shall satisfy the requirements of this specification.
b) liquid contaminant dye (5 g of potassium permanganate per litre of water);

WARNING: Potassium permanganate is an oxidant and appropriate precautions should be taken when preparing the solution.

c) calibrated spectrophotometer or opacity meter with cuvette:
d) fluid suction device;
e) water supply.

4.3 Procedure

Set the dual-flush controller or setting - if provided - to the *full-flush volume* in accordance with the manufacturer's instructions. Fill any cistern to the marked water level. Shut off the water supply, unless essential for the normal operation of the flushing device.

Note. Where a water supply is essential for the normal operation of the device, maintain the supply at a hydraulic pressure of (1.5 ± 0.1) bar or the minimum required to operate the device, whichever is the greater.

Using the fluid suction device, remove any water from the WC's trap. Measure the opacity through the 5 g of potassium permanganate per litre of water dye solution (Stock solution). Record the result. Fill the WC's trap with liquid contaminant dye to the trap seal depth. Operate the flushing device. On completion of the flush, place a sample of the liquid remaining in the trap in the cuvette. Measure and record the concentration of potassium permanganate in the sample. Calculate its percentage dilution against the stock solution Repeat the procedure a further 4 (9) times as appropriate (see acceptance criteria)

Reset the dual-flush control or setting - if provided - to *reduced-flush volume* and repeat the above procedure 5 (10) times as appropriate at the reduced flush volume

4.4 Expression of results

Record compliance, or failure to comply with the requirements of the acceptance criteria.

5. ACCEPTANCE CRITERIA

When tested as described above, for the first five flush cycles, or for a minimum of nine out of ten flush cycles at full flush volume, the contaminate level shall be ≤ 1 %. For the first five flush cycles, or for a minimum of nine out of ten flush cycles at reduced flush volume when provided, the contaminate level shall be ≤ 6 %.