

OFFICE OF THE WATER AUTHORITY
Leighton Centre 12/F,
77 Leighton Road,
Hong Kong

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12th April, 1978.

To : Authorised Persons,
Licensed Plumbers.

Dear Sirs,

Cold Water Inside Services
Use of Unplasticised Polyvinyl Chloride Pipes and Fittings

With immediate effect requests for approval to use unplasticised polyvinyl chloride (u.P.V.C.) pipes and fittings on cold water inside services will be considered by the Water Authority.

It should be made quite clear that in view of the problems which could arise if inferior quality materials were to be used, staff of the Department have been instructed to exercise the strictest possible control in the use and application of this material. Approval will only be given where it can be guaranteed that materials used are to a standard acceptable to the Water Authority (see attached Note for Standards).

In respect of plumbing installations for new buildings, requests will only be considered if received directly from the authorised person concerned or from a licensed plumber nominated by him - such a nomination having been formally advised in writing to the Water Authority. In other cases licensed plumbers may request approval to use u.P.V.C. pipes and fittings when submitting Form G. In all cases the application must contain information on the make, standard and pressure rating of the pipe to be installed.

The responsibility of Licensed Plumbers to ensure that all u.P.V.C. installations comply with requirements must be emphasised and attention is drawn to Regulation 37 which provides for cancellation/suspension of a plumber's licence for contraventions of the provisions of the Waterworks Ordinance. Infractions will be severely dealt with.

The attached note has been prepared on an advisory basis to assist authorised persons and licensed plumbers when considering the possible use of u.P.V.C. materials.

Yours faithfully,

Signed

(W.D.A. Tucker)
Director of Water Supplies

Encl.

**Note on the Permitted Usage of
Unplasticised Polyvinyl Chloride
Pipes and Pipe Fittings on
Cold Water Inside Services**

The use of u.P.V.C. materials on flushing systems has been widely adopted since January 1975 when Regulation 17 of the Building (Standards of Sanitary Fittings, Plumbing, Drainage Works and Latrines) Regulations, in amended form, became effective. B.O.O. Circular Letter No. 42 of 26th August 1966 or amendments thereof contains the standards acceptable to the Water Authority.

With the extension of usage of u.P.V.C. materials to cold water inside services, strict enforcement of requirements becomes even more important and :

- (i) High standards must be maintained for both potable water and flushing water systems.
- (ii) Authorised Persons will have the responsibility of ensuring that approved materials are specified. (Consideration may be given to the need for certification by Authorised Persons if this becomes apparent).

Standards

- (i) All u.P.V.C. pipes and fittings used on cold water services for potable and flushing inside services shall comply with the following British Standards :-
 - 3505 Unplasticised P.V.C. pipe for Cold Water Services.
 - 4346 (Part 1) - Injection moulded Unplasticised P.V.C. Fittings for Solvent Welding for use with Pressure Pipes, including Potable Water Supply.
 - 4346 (Part 2) - Mechanical joints and fittings principally of Unplasticised P.V.C.
- (ii) Pipes and fittings to other recognised National/International Standards may be accepted by the Water Authority subject to it being shown that the requirements thereof are in no way inferior to those of the relevant British Standards.

(iii) Pipes and fittings shall comply with the following Particular Specification :-

- (a) Pipes shall be to B.S. Class D (12 bar working pressure at 20°C).
- (b) Pipes shall be marked by an indelible process (in English or Chinese) at not greater than three metre intervals, as follows :-

Nominal Size

- Working Pressure

- Name of Manufacturer (or Trade Mark)

- Standard to which pipes are manufactured
(e.g. B.S. 3505; J.I.S. K6742).

Markings shall be in the colour laid down in the particular Standard.

- (c) Fittings shall be for a working pressure of 12 bar (20°C).
- (d) If requested by the Water Supplies Department, toxicity certification must be furnished by the Authorised Person or Licensed Plumber before any pipework is installed.

Installation Notes

The following should be particularly noted :-

- (i) u.P.V.C. is "notch sensitive". Application of screw threads to pipes is not permissible. Where screwed connections are required (e.g. to valves/fittings) screwed adaptor bushes must be used.
- (ii) u.P.V.C. has a higher co-efficient of expansion than steel. Attention must be paid to the need for the provision of joints to accommodate movement on long pipe runs, due regard being made to maximum/minimum temperatures in the particular location.
- (iii) u.P.V.C. materials are sensitive to ultra-violet light. Pipe runs must be shielded from direct sun rays and where exposed throughout the day shall be painted with white acrylic paint.

- (iv) Pipe runs must be adequately supported. Standard or purpose made pipe brackets should be used. These should be free of sharp edges. For recommended support spacing, reference should be made to manufacturers literature.
- (v) Pipe runs must be well clear of any pipe run carrying hot water and any hot surface.
- (vi) Jointing of pipes and fittings within buildings will normally be by means of solvent cement joints. Proprietary couplings may be used subject to the prior approval of the Water Authority.
- (vii) All installations must be thoroughly flushed out before used for potable purposes.

Waterworks Regulations - PART II - Taps and Valves

Nothing in these notes should be construed as indicating any relaxation whatsoever on the use of u.P.V.C. taps, valves or in the components thereof.

Water Supplies Department