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British Standard Specification for

Unplasticized polyvinyl chloride (PVC-U) rainwater goods and accessories

Part 1. Half-round gutters and pipes of circular cross section

Canalisations et accessoires de canalisation d'eaux pluviales en chlorure
de polyvinyle non plastifié (PVC-U) — Spécifications
Partie 1. Gouttières demi-rondes et tuyauteries de section circulaire

Installationen aus weichmacherfreiem Polyvinylchlorid (PVC-U)
und Zubehör zur Regenwasserableitung
Teil 1. Halbrunde Dachrinnen und Rohre mit rundem Querschnitt

British Standards Institution

Foreword

This British Standard has been prepared under the direction of the Plastics Standards Policy Committee.

It is a revision of BS 4576 : Part 1 : 1970, which is now withdrawn.

This specification is applicable to half-round gutters in nominal sizes from 100 to 150 and circular rainwater pipes in nominal sizes from 63 to 110 and their associated fittings and supports. It continues to be designated as Part 1 of BS 4576, to allow for specifications of pipes and gutters of other section profiles to be given in supplementary Parts as applicable. Nominal sizes 63, 75 and 110 are selected from BS 5556, but 68 and 82 are intermediate sizes for systems of established use not provided for by BS 5556.

Attention is drawn to CP 312 Parts 1 and 2, which have been prepared to assist users in assessing the suitability of plastics pipes for particular purposes and to ensure their proper application.

Attention is drawn to BS 6367 for general guidance on the installation and use of rainwater goods. In particular, table 1 of BS 6367 : 1983 gives flow capacities for 'true half-round' and 'nominal half-round' gutters of certain standard sizes: the dimensional requirements of this standard for those types of gutters are compatible with the flow capacities for the corresponding sizes given in that table. Furthermore, the general principles in BS 6367 for hydraulic design of roof drainage allow for the three parts of the system (gutter/gutter outlet/pipework) to be designed separately, provided that the outlet and pipework are large enough for the gutter to discharge freely. In this context, attention is drawn to BS 4514, because pipes and associated fittings and supports in accordance with that standard are considered satisfactory as alternatives to the corresponding components specified in this standard for receiving and conveying rainwater from gutters of the corresponding nominal size in accordance with this specification. Attention is also drawn to the recommendations given in BS 6367 concerning the use of snow boards. The major changes between this revision and the previous edition are as follows.

(a) This revision allows for the use of gutter spout spigots of non-circular section pending specification by means of one or more supplementary Parts of BS 4576 of gutters and rainwater pipes having other than radiused section profiles.

(b) A more logical concept for sizing gutters has been used.

(c) The requirements and test method applicable to gutter brackets have been revised. The forces specified for deadweight loading of gutter brackets (see table 5) have been set to correspond to the maximum force applied to a single bracket when tested under a sand load in accordance with appendix F of the 1970 edition, when that maximum force is rounded up to the nearest 10 N. They are intended to ensure resistance to snow loadings in all UK localities other than the Scottish Highlands, as classified in BS 6367 : 1983. In such severe locations, special installation measures may be necessary, for example closer spacing of brackets.

(d) Where possible, reference has been made to the methods of test described in BS 2782 'Methods of testing plastics'. In particular, cross-references are made by this revision for the purposes of testing for leaktightness, impact resistance and tensile strength.

(e) For measurements of tensile properties, the speed of testing has been increased from 3 mm/min to 5 mm/min.

(f) Impact resistance requirements are specified in terms of a true impact rate (TIR) at the 10 % level.

(g) Guidance is given on the applicability of the requirements and the methods of test to various types of fittings and accessories for quality control.

(h) References to other standards have been updated and the terminology and symbols used have been aligned with BS 1755 : Part 1 and ISO 1043 : Part 1 as applicable: in particular, the latter is the basis for use of PVC-U to represent rainwater goods based on unplasticized polyvinyl chloride.

Product certification. Users of this British Standard are advised to consider the desirability of third party certification of product conformity with this British Standard based on testing and continuing surveillance, which may be coupled with assessment of a supplier's quality systems against the appropriate Part of BS 5750.

Enquiries as to the availability of third party certification schemes will be forwarded by BSI to the Association of Certification Bodies. If a third party certification scheme does not already exist, users should consider approaching an appropriate body from the list of Association members. Attention is drawn to the provisions of the Health and Safety at Work etc. Act 1974 and the need to ensure that appropriate precautions are taken to ensure the safety of personnel when carrying out methods of test required by this standard.

Compliance with a British Standard does not of itself confer immunity from legal obligations.