

ICS 83.140.30

CCS G 33



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 5836.2-2018

Replacing GB/T 5836.2-2006

**Unplasticized poly(vinyl chloride) (PVC-U) fittings for soil and
waste discharge inside buildings**

建筑排水用硬聚氯乙烯 (PVC-U) 管件

Issued on: December 28, 2018

Implemented on: July 1, 2019

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

Issued on 28 December 2018 by the State Administration for Market Regulation and the Standardization Administration of the PRC, and implemented from 1 July 2019. ICS 83.140.30; Chinese classification CCS G 33. This part replaces GB/T 5836.2-2006.

GB/T 5836 is divided into two parts: GB/T 5836.1-2018 Unplasticized poly(vinyl chloride) (PVC-U) pipes for soil and waste discharge inside buildings, and GB/T 5836.2-2018 Unplasticized poly(vinyl chloride) (PVC-U) fittings for soil and waste discharge inside buildings. This is Part 2 of GB/T 5836.

This part was drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB/T 5836.2-2006 Unplasticized poly(vinyl chloride) (PVC-U) fittings for soil and waste discharge inside buildings. Compared with GB/T 5836.2-2006, the main technical changes are as follows: the material requirements have been modified and a requirement on the K value of the resin has been added (see 4.2); a requirement on the

lead limit has been added (see 6.6); a classification of inspection has been added (see 8.1); the sampling plan has been modified, the acceptance quality limit (AQL) being raised from 6.5 to 4.0 (see 8.3.2); the requirements for type inspection have been modified (see 8.4); dimension groups of the fittings have been added (see 8.4.1); and some properties of the compound used for unplasticized poly(vinyl chloride) (PVC-U) fittings have been added (see Annex A).

Attention is drawn to the possibility that some of the content of this document may involve patents. The issuing body of this document assumes no responsibility for identifying such patents.

This part was proposed by the China National Light Industry Council.

This part is under the jurisdiction of the National Technical Committee on Plastic Products Standardization (SAC/TC 48).

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The previous editions of the standard replaced by this part were issued as follows: GB/T 5836-1986; GB/T 5836.2-1992 and GB/T 5836.2-2006.

1 Scope

The fittings in a building drainage stack take far more punishment than the straight pipe does. Every bend, branch and reducer is where the flow changes direction, where the hot detergent water from a kitchen sink dwells longest, where the wall thickness varies because the part was injection moulded rather than extruded, and where the joint has to stay tight for the life of the building without any chance of re-tightening once the shaft is closed. A socket moulded from a badly plasticized compound, or from resin of too low a K value, cools with frozen-in stresses and internal voids that a visual check will never reveal; it will pass the pressure test on the day of handover and then split years later behind a partition, where the leak is found only after the wall has rotted. This part sets the compound, the dimensions of socket and spigot, the appearance, the drop and oven behaviour, the Vicat softening temperature and the lead content of unplasticized PVC fittings, and it fixes the sampling and type-testing rules that decide whether a delivered lot may be accepted. Its dimensions are matched to the pipes of GB/T 5836.1-2018, so that pipe and fitting form one system.

This part of GB/T 5836 specifies the terms, definitions and symbols, materials, product classification, requirements, test methods, inspection rules, marking, transport and storage for unplasticized poly(vinyl chloride) (PVC-U) fittings for soil and waste discharge inside buildings, hereinafter referred to as the fittings.

This part applies to injection-moulded fittings for drainage systems inside buildings made with poly(vinyl chloride) (PVC) resin as the principal raw material. Where the chemical resistance and heat resistance of the material have been considered and satisfy the conditions of use, they may also be used as fittings for industrial drainage.

The fittings specified in this part are used together with the pipes specified in GB/T 5836.1-2018.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document, including all amendments, applies.

GB/T 1033.1-2008; GB/T 1040.2-2006; GB/T 1633-2000; GB/T 2828.1-2012; GB/T 2918-1998; GB/T 5761-2006; GB/T 5836.1-2018; GB/T 8801-2007; GB/T 8802-2001; GB/T 8803-2001; GB/T 8806-2008; GB/T 19278-2018; GB/T 21873-2008; GB/T 26125-2011; QB/T 2568-2002. The full titles are listed among the normative references of this record.

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in GB/T 19278-2018 and the following apply.

3.1.1 wall thickness at main body, symbol e_1 : the wall thickness at any point outside the connecting portions of the fitting.

3.2 Symbols

The following symbols apply to this document. A, jointing length; C, length of the sealing zone; d_e , outside diameter at any point; d_{em} , mean outside diameter; d_n , nominal outside diameter; d_s , nominal inside diameter of the socket; d_{sm} , mean inside diameter of the socket; e_y , wall thickness at any point; e_1 , wall thickness at the main body; e_2 , wall thickness of the socket; e_3 , wall thickness at the sealing ring groove; L1, depth of the socket; L2, length of the spigot; R, radius of curvature at the bend of the fitting; z, laying length of the fitting, the z-length.

4 Materials

4.1 The material used to produce the fittings shall be an unplasticized poly(vinyl chloride)

(PVC-U) compound. The compound shall be based on poly(vinyl chloride) (PVC) resin with the necessary additives added, and the additives shall be uniformly dispersed. NOTE: for some properties of the compound see Annex A.

4.2 The PVC resin shall comply with the requirements of GB/T 5761-2006 and its K value shall be not less than 55.

4.3 A small quantity of clean reprocessed material arising from the same product produced in the manufacturer's own works is permitted.

4.4 The adhesive used for jointing shall comply with the requirements of QB/T 2568-2002.

4.5 The elastomeric sealing ring shall comply with the requirements of GB/T 21873-2008.

5 Product classification

According to the form of connection, the fittings are divided into fittings for adhesive jointing and fittings for elastomeric sealing ring jointing.

6.1 Appearance

The inner and outer walls of the fitting shall be smooth and free from bubbles, cracks and obvious streaks, depressions, uneven colour and decomposition discoloration lines. The fitting shall be complete and undamaged, and the gate mark and flash shall be trimmed flat.

6.2 Colour

The fittings are generally white or grey; other colours may be determined by agreement between supplier and purchaser.