

PAS 1188-2

Flood protection products — Specification — Part 2: Temporary and demountable products

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Foreword

This Publicly Available Specification, PAS 1188-2, has been prepared by BSI in consultation with HR Wallingford Ltd and research partners to provide a specification for temporary and demountable flood protection products for use in the UK or locations with similar exposures, i.e. where there is a temperate climate and advanced warning of flooding is available. It was funded as part of a DTI-led collaborative research project “Evaluation of the performance of products and materials to resist flooding of buildings”¹⁾.

This PAS is published in three parts:

- *Part 1: Building apertures*;
- *Part 2: Temporary and demountable products*;
- *Part 3: Building skirt systems*²⁾.

NOTE 1 The flood protection products described in this part of PAS 1188 are not intended for permanent use, although some products/parts of products may be left permanently installed. Attention is drawn to manufacturers’ instructions regarding the installation and removal of the products/parts of products.

NOTE 2 Attention is drawn to the need to consider the prevention of the ingress of flood water through horizontal pipes, waste water fittings and floor gullies. Anti-flooding devices for buildings are covered in BS EN 13564-1. Attention is also drawn to the need to consider flow and ingress of floodwater through the ground.

NOTE 3 A relevant guidance document, *Temporary and demountable flood protection systems* [1], is available through the Environment Agency and direct via the Agency’s website at www.environment-agency.gov.uk/floodline.

The guide complements the guidance document *Preparing for floods — Improving the flood resistance of domestic and small business properties* [2], which gives information on methods for improving the flood resistance of domestic and small business properties, available from the Office of the Deputy Prime Minister website www.safety.odpm.gov.uk/bregs/floods/index.htm and through the Environment Agency’s 24-hour “Floodline”, which can be reached on 0845 988 1188. The document is also available through the Agency’s website at www.environment-agency.gov.uk/floodline.

In addition to the above guidance documents, a leaflet titled *Flood products. Using flood protection products – A guide for homeowners* [3] is available through the Environment Agency’s 24-hour “Floodline” and the Agency’s website (contact details as above).

Acknowledgement is given to the following organizations that were partners in the project and/or were consulted in the development of this specification.

Department of Trade and Industry
DEFRA (Department for Environment, Food and Rural Affairs)
Environment Agency
CIRIA (Construction Industry Research and Information Association)
Association of British Insurers
Council for Mortgage Lenders
House Builders Federation
National House-Building Council
Scottish Executive
Welsh Assembly Government
National Flood Forum
Flood Protection Association
Severn Trent Water

¹⁾ Evaluation of the performance of products and materials to resist flooding of buildings, Contract C1 39/5/132, cc2322. DTI, 2002-03.

²⁾ Currently under development.

Thames Water
Water UK
Worcester City Council
Birmingham City Council
BRE (Building Research Establishment)
Office of the Deputy Prime Minister (ODPM)
Local Government Authority
BSI Product Services
BSI Technical Subcommittees

It is intended that this PAS will form the basis of a product conformity certification scheme to provide assurance to purchasers of flood protection products that they have been independently tested and that the manufacturer's production controls are in accordance with stated requirements.

WARNING This PAS calls for the use of procedures that may be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage. Attention is also drawn to additional company health and safety policy that may be in place. Testing should be stopped immediately if the safety of persons is in doubt at any time.

This specification is not intended to restrict new developments in design and materials.

This PAS is not to be regarded as a British Standard. It will be withdrawn upon publication of its content in, or as, a British Standard.

NOTE 4 The PAS process enables a specification to be rapidly developed in order to fulfil an immediate need in industry. A PAS may be considered for further development as a British Standard, or constitute part of the UK input into the development of a European or International Standard.

This PAS has been prepared and published by BSI, which retains its ownership and copyright. BSI reserves the right to withdraw or amend this PAS on receipt of authoritative advice that it is appropriate to do so. This PAS will be reviewed at intervals not exceeding two years, and any amendments arising from the reviews will be published as an amended PAS and publicized in *Update Standards*.

Product certification. Users of this PAS are advised to consider the desirability of third-party certification of products conforming to this PAS.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a Publicly Available Specification does not in itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 14, an inside back cover and a back cover.

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1 Scope

This PAS specifies requirements for the designation, testing, factory production control, installation documentation and marking for different types and configurations of flood protection products intended to be demountable or for temporary installation, for use in the UK or locations with similar exposures, i.e. where there is a temperate climate and advanced warning of flooding is available.

This PAS specifies the method of testing and an allowable leakage rate.

NOTE 1 The PAS test conditions represent typical conditions that may be experienced during a flood. This includes testing the product on a concrete base for leakage and structural failure under static water levels, random waves up to 0.1 m high and parallel currents up to 1 m/s.

NOTE 2 Certification of the product does not mean it is suitable for all locations, exposures and foundation types. If the user is in any doubt as to the suitability of a product to any specific location, they should seek further guidance as set out in *Temporary and Demountable Flood Protection Systems — A Guidance Document* [1] or from the Flood Protection Association (www.floodprotectionassociation.org) or other professional advisers.

NOTE 3 Extreme loading conditions such as those resulting from turbulent water or from debris impact are not covered by testing in this PAS. In these locations the product should be specifically designed and/or tested to withstand such stresses.

NOTE 4 Temporary and demountable flood protection products are normally installed in conjunction with a pumping arrangement to remove any excessive leakage.

This PAS is not applicable to flood protection products for installation across building apertures such as individual doors, windows, air bricks and air vents; these are covered by PAS 1188-1.

2 Terms and definitions

For the purposes of this PAS, the following terms and definitions apply.

NOTE For definitions of barrier types, see Annex A.

2.1

anchor

means of providing secure fixity of the flood protection product to the laboratory floor

NOTE Pins, bolts and sandbags are examples of anchors.

2.2

demountable flood protection product

flood protection product that is capable of being removed and reinstalled on permanent mountings

2.3

demountable flood protection system

flood protection system that is either fully pre-installed and requires operation during a flood event or a system that requires part-installation into guides or sockets within a pre-constructed foundation

NOTE A demountable flood protection system is made up of demountable sections and permanent sections that act together to form a demountable flood protection system when fully installed.

2.4

factory production control

permanent, internal control of production exercised either by the manufacturer or by his agent on the responsibility of the manufacturer

NOTE Factory production control comprises operational techniques and all measures necessary to regulate and maintain the conformity of the product to the requirements of this specification.