

Performance of windows —

Part 1: Classification for weathertightness (including guidance on selection and specification)

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Committees responsible for this British Standard

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- Aluminium Window Association
- Association of Builders Hardware Manufacturers
- British Plastics Federation
- British Precast Concrete Federation Ltd.
- British Wood Preserving Association
- British Woodworking Federation
- Building Employers Confederation
- Consumer Policy Committee of BSI
- Department of Health and Social Security
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property Services Agency)
- Flat Glass Manufacturers' Association
- Glass and Glazing Federation
- Guild of Architectural Ironmongers
- Health and Safety Executive
- Institution of Fire Engineers
- London Housing Consortium
- National House-Building Council
- Royal Institute of British Architects
- Steel Window Association
- Timber Research and Development Association

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Foreword

This revision of BS 6375-1:1983, has been prepared under the direction of the Elements and Components (of Diverse Materials) for Buildings Standards Policy Committee. BS 6375-1:1983 is withdrawn.

The classification in this revision has been simplified to facilitate the selection and specification of windows and is now related to exposure categories, based on design wind pressures, and is given in one table. Guidance on the selection and specification of windows for weathertightness is included as in the previous edition.

The standard classifies the performance of windows as manufactured. Actual performance of windows in use will depend on a number of factors including the way the windows are installed in the building, the associated design detail and the degree of maintenance. For example, in the watertightness test the window is mounted flush and in practice a better performance in respect of watertightness can usually be obtained by setting a window back from the outer face of the wall.

BS 6375-2 specifies requirements for operation and strength characteristics of windows.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

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1 Scope

This Part of BS 6375 gives a classification of windows for weathertightness in terms of exposure categories related to test pressure levels for air permeability, watertightness and wind resistance.

It is applicable to all types of windows in which any frame member is not longer than 3 m, and includes windows in which the opening lights are not fully framed, e.g. adjustable glass louvres and sliding windows.

The standard excludes patent glazing (see NOTE 2) and curtain walls that span across horizontal structural members of floors but includes the opening lights within a patent glazing or curtain walling system.

Guidance on the selection and specification of windows for weathertightness is given in Appendix A. Methods of calculating design wind pressure are given in Appendix B.

NOTE 1 The titles of the publications referred to in this standard are listed on the inside back cover.

NOTE 2 Recommendations for the design and installation of patent glazing are given in BS 5516.

2 Definitions

For the purposes of this Part of BS 6375, the following definitions apply.

2.1

window

any part of an external wall that consists predominantly of transparent or translucent sheet material contained within a frame or frames, with any necessary intermediate frame members or coupling members

2.2

basic wind speed

the maximum 3 s gust speed likely to be exceeded on average only once in 50 years at 10 m above the ground in open country

NOTE Definitions of the wind speed factors, S_1 , S_2 , S_3 and S_4 , are given in CP 3:Chapter V-2.

2.3

combined internal and external pressure coefficient (C_p)

a factor applied to the dynamic pressure of the wind to allow for the most onerous combination of internal and external pressures on a window

2.4

design wind pressure

the wind pressure that can be expected on a surface of a building having taken into account the topography, ground roughness, building height above ground and the shape of the building by applying pressure coefficients to the dynamic pressure of the wind (see 2.2 and CP 3:Chapter V-2)

2.5

dominant opening

a substantial opening in a facade that will influence significantly the internal pressure in a building thus affecting the design wind pressure (see also CP 3:Chapter V-2)

2.6

microclimate

localized climatic conditions that are different from those of the surrounding region, caused either by the topography or by adjacent buildings

2.7

ventilation device

a ventilator other than an opening light incorporated in a window. The “permanent” type provides continuous ventilation. The “controlled” type is closable and can be adjusted to provide a small amount of ventilation