

GGF Datasheet: Windows & Doorsets -  
Safety - Dwellings

6.1 Jan 2021

## Contents

1. Introduction
2. Scope
3. Definitions
4. Guidance

Annex A – Additional information

Bibliography

## 1. Introduction

This datasheet provides background, guidance and direction related to the Statutory Regulations and Standards which must be complied with when placing windows and doorsets on the UK and ROI markets.

It is also important to recognise that customers may need, or expect performance and/or functionality in addition to these requirements. The relationship between statutory obligations and customer desires has to be understood when aiming to provide products and installations that result in satisfied customers.

The background and supplementary information in this datasheet should assist in understanding these issues and provide the necessary information to support negotiations and agreements.

It should be noted that the requirements for windows and doorsets can be quite different when being supplied for replacement within an existing building aperture than those for windows and doorsets in an extension to an existing dwelling or for a complete new-build.

This datasheet is not a comprehensive set of instructions of how to meet all obligations, statutory or regulatory, and should not be relied upon as such. The responsibility lies with the building owner to ensure that the work carried out is safe and complies with the relevant regulations. A risk assessment should be carried out prior to works starting. GGF member companies will be able to assist with additional guidance on

safe working practices and regulation compliance.

There is no intent to reproduce here all the data contained in standards, statutes or regulations as these are subject to regular review and amendment and are easily accessible. The user is advised to ensure that they are always referring to the most up-to-date version of any document being relied upon.

## 2. Scope

This document describes performance aspects of windows and doors relating to the safety of people using or moving about buildings.

It applies to windows and doors made from any material and intended for installation within the building envelope of dwellings.

## 3. Definitions

Restricting Device - Mechanical device which is intended to limit the opening movement of a window sash so that a clear opening of no more than 100mm is achieved.

Means of Escape - Method employed to allow people to leave the building in an emergency situation, usually fire, to a safe place.

Building envelope - All elements of the outer shell of a building that maintain a dry, heated or cooled indoor environment.

Place of Safety - In relation to fire escape. An area that is able to provide an open space so that people can disperse away from the building so that they are no longer in danger from smoke and/or fire.

Inner Room - A room in which the only means of escape is through another room.

Guarding - A barrier which denies access or prevents falling from an opening.



Glass and Glazing Federation

**Glass and Glazing Federation**  
**40 Rushworth Street, London SE1 0RB**  
**Tel: 020 7939 9100 Fax: 0870 042 4266**  
**[www.ggf.org.uk](http://www.ggf.org.uk)**

While every attempt is made to present up to date information, this Data Sheet, produced by the Glass and Glazing Federation, is issued for guidance but without responsibility for any advice given therein or omission therefrom or for the consequences of acting in reliance thereon and all liability on the part of the Glass and Glazing Federation however arising in connection

#### 4. Guidance

The design of windows and doorsets can have an impact upon the safety of people using or moving about buildings. They can provide a means of escape in an emergency such as a fire. They can be mistaken for an opening causing accidental collision. Glazing may be in a position with a high risk of accidental impact and needs to be specified to avoid injury or withstands loads to protect people from falling. Open windows represent a risk of falling and also of collision if projecting into a walkway. As part of a building envelope, windows and doors may be required to prevent occupants from the spread of fire and smoke.

##### 4.1 Escape in case of fire

In some circumstances, a window or door may be the only means of escape from a room to a place of safety. Regulations will stipulate which products are to be defined as requiring escape properties but generally the further away from a direct access to a place of safety, the greater the risk. Examples of such situations are: -

An upstairs room where escape down the stairs may be blocked and the window is then the only means of escape

or

A so-called "Inner room" where direct access to the outside is normally only through an adjoining room. If the adjoining room was blocked, the window would be the only means of escape.

Any window designated as having escape potential will be expected to have an area greater than a specified minimum and be easily accessible, with the lowest part of the opening having a maximum height from the floor allowable.

Doors and windows may need to be locked or restricted for protection from falling or security so their escape potential is compromised if the means for unlocking is not readily available. Where possible, the use of locking hardware on windows providing means of escape should be avoided.

Providing escape through a window, especially from height, (an upper storey height of over 4.5m above ground level) is not desirable and shall be avoided. Precautions such as smoke detectors will give occupants early warning and allow escape from the property by normal means to a place of safety (before a fire prevents movement).

##### 4.2 Safety glazing

Some of the glazing in a dwelling/building can represent a

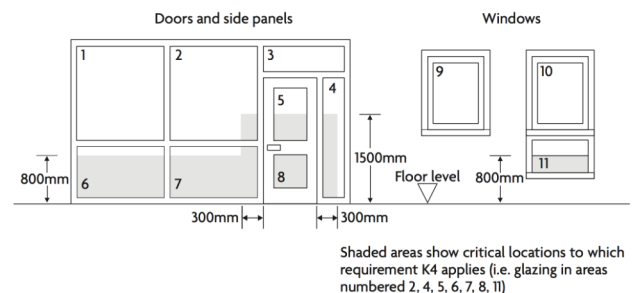
hazard if people come into contact with it whilst moving in or about the property, examples being large areas of glass that may be mistaken for a clear opening, or areas of glass which are at risk of an accidental collision as a result of some other incident such as a slip or fall.

Do not forget that a window not normally considered as low level can become one if activities nearby are conducted above floor level, for example standing in a bath, or the existence of a structure near a window which can be stood on, such as a window seat.

Where glass has a high risk of impact, it shall either: -

- Be shielded to prevent impact.
- Be sufficiently robust to resist the impact without breaking.
- Break in such a way as to be unlikely to cause (serious) injury.

High risk locations and the glazing requirements are specified in regulations but the eventual choice of solution may be impacted by other customer requirements such as size/weight and security.



##### 4.3 Falling from height

Opening windows can represent risk of a person falling through. Where this is considered a particular risk, such as with young children, then hardware to prevent or restrict the opening should be fitted. In some circumstances, the fitting of a restricting device or some form of guarding may be required by regulation. Where restriction is fitted which may require a key for release then the impact upon escape in case of fire should be assessed.

In some circumstances, such as low level glazing in an upper storey room, the glazing may be required to be sufficiently robust to represent a barrier and prevent falling through. Where this risk is present, special knowledge and competence is required to assess the likely loads and specify appropriate materials for the glazing. The GGF publication 7.2 Guidelines for the Use of Glass in Protective Barriers contains more detail. Also see Diagram 5.4

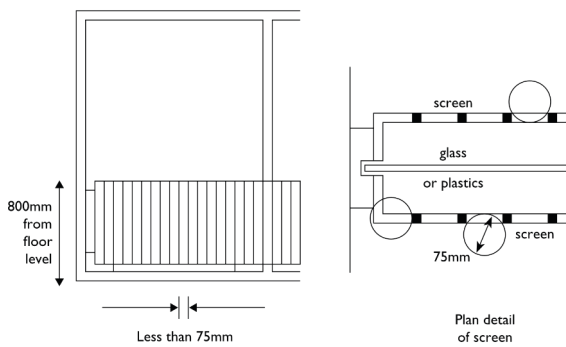


Diagram 5.4

#### 4.4 Safety during use and maintenance

The design and method of operation should be carefully considered to provide for safety during normal use.

An open window which projects can be collision hazard to people moving in its vicinity. Windows with other modes of operation, such as vertical sliding sashes, could be considered to reduce such a risk.

Window designs exist which allow cleaning from inside the building, thereby reducing the risk from having to access the outside by means of a ladder. Some of these designs include, but are not limited to Tilt & Turn, Topswing and Vertical Sliding windows.

#### 4.5 Fire resistance

Regulations may require windows and doors to have a specified resistance to the spread of fire and smoke.

##### Annex A – Additional Information

##### Escape in case of fire and safety glazing

Fire safety and safety glazing regulations are covered in the UK and Ireland Building Regulation guidance documents. The GGF has produced a guide to the use of these documents.

For England and Wales the guide is 9.1A - A guide to Building Regulations.

For Scotland the guide is 9.1B - A guide to Building Regulations

For Northern Ireland the guide is 9.1C - A guide to Building Regulations

For the Republic Of Ireland the guide is 9.1D - A guide to Building Regulations

Safety during use and maintenance

BS 8213-1 gives guidance on the safe use and maintenance of windows and doors. Table 1 of BS8213-1 lists the associated risks of use and risk in cleaning of various window types and offers advice on how to reduce or eliminate the risk. For example, different styles of windows should be considered that allow cleaning from the inside. Easy clean hinges are also available for casement windows to allow for safe cleaning from the inside. An easy clean hinge shall have at least a 105mm opening between the sash and the frame to allow cleaning.

#### Bibliography

The latest edition of the referenced document applies.

GGF 7.2 - Guidelines for the Use of Glass in Protective Barriers contains more detail.

GGF 9.1A - A guide to Building Regulations. England and Wales

GGF 9.1B - A guide to Building Regulations. Scotland

GGF 9.1C - A guide to Building Regulations. Northern Ireland

GGF 9.1D - A guide to Building Regulations. Republic Of Ireland

BS 8213-1 - Windows, doors and roof lights: Design for safety in use and during cleaning of windows, including door-height windows and roof windows – Code of practice

BS 8213-4 - Code of practice for the survey and installation of windows and external doorsets