



Glass and Glazing Federation

**GGF Guidance Document
Update on The Workplace
(Health Safety and Welfare)
Regulations 1992 - Regulation 14**

1. Scope

The Workplace (Health Safety and Welfare) Regulations 1992 came into force on 1 January 1996. Regulation 14 imposed on those responsible, a duty to undertake a risk assessment of their glazing in critical locations (reference clause 4) to identify any glass that could create a risk of injury to the buildings users or visitors. If this identified glass was determined not to be of a sufficient safety standard (reference clause 2) then appropriate action should be taken to upgrade the glazing and to reduce the risk of such injury. Many organisations undertook remedial actions at this time and in the preceding years. However it has been shown that a large number of organisations including colleges, schools, hospitals and other public sector buildings as well as the private sector have not acted.

With avoidable accidents and injuries from glass still happening it is recommended that both those buildings which had made assessments up to ten years ago and those who did nothing need to review their current status of the glazing in their buildings.

To ignore these Regulations could result in those who are responsible being prosecuted. If an accident were to happen due to the glazing, the legal action and consequences would be greater.



2. The Regulation

In the ten years of this Regulations existence there has been a lot of confusion as to what the Regulation requires and how to go about conformance. The Regulation actually states;

'Every window or other transparent or translucent surface in a wall or partition and every transparent or translucent surface in a door or gate shall, where necessary for reasons of health and safety:

be of safety material or be protected against breakage of the transparent or translucent material and be appropriately marked or incorporate features so as, in either case to make it apparent.'

3. The First Steps to Compliance

- a) Initiate a risk assessment of your glazing is undertaken to ascertain whether or not there is a risk of injury. (Recommendations can be found in BS6262 Part 4).
- b) Determine the type of glass and its current safety rating within those critical locations.
- c) Create a detailed report of work to be undertaken so that all glazing identified as unsafe for its location will be upgraded.
- d) Ensure that both the assessment and the schedule of work are fully documented.
- e) Instigate a programme to monitor and review the current situation on a regular basis. (Ensure the schedule of work is completed and any subsequent reorganisation does not create a new potential risk).

4. Critical Locations

The recommendations for 'Critical Locations' are recognised (from BS6262 Part 4) as;

Risk Code 1 Panels in doors and panels next to doors (within 300mm) up to 1500mm from finished floor level.

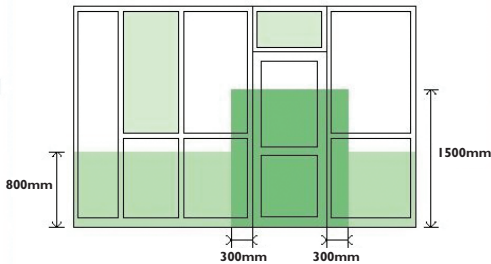
Risk Code 2 Low Level Panels within 800mm from finished floor level.




Risk Code 3 Glazing in Balustrades

Risk Code 4* Glazing in Wet Areas

Risk Code 5** Areas of Special Risk

It must be noted that Risk Code 1 is no more severe than Risk Code 5



-  **Doors**
Glazing adjacent to doors
-  **Low level glazing**
-  **Safety glass is not a requirement here**

***Glazing in Bathing Areas** – any glazing forming part of a bath or shower screen, or located adjacent to, or surrounding a bath, swimming pool, or other associated wet area constitutes a potential danger because of the possibility of a slip accident.

****Areas of Special Risk** – In all those parts where the planned activity generates a special risk for example indoor sports facilities, all glazing should conform to the requirements for critical locations. In these situations a higher classification requirement should be considered and if additional safeguards such as protective screens or manifestation is required.

Exceptions

Small Panes – ordinary annealed glass may be used in small panes up to a maximum width of 250mm and an area not exceeding 0.5 sq metres. Such glass must be not less than 6mm in thickness except in the case of traditional leaded lights and copper lights where 4mm can be used.

Robustness – robustness refers to the strength of the glazing that forms fronts to non domestic buildings. Some glazing such as polycarbonate is inherently strong. Annealed glass that does not achieve a classification with BS EN 12600 can gain robustness with increased thickness.

Permanent Screen Protection – if glazing in a critical location is protected by a suitably designed protective screen these recommendations do not apply.

5. Methods to Minimise Risk

The following methods can be used to minimise the risks of injury:

- a) Use a 'safety material' [including safety film] which, if it breaks, breaks safely (as defined in EN 12600+BS6206)
- b) Use inherently robust materials.
- c) Use ordinary annealed glass of an approved thickness.
- d) Provide permanent screen protection.
- e) Remove the risk by reorganising activities in the vicinity of the glazing.

+ The classification of BSEN 12600 is as follows;

α β ϕ

Where:

α is the drop height at which the product either did not break or broke safely.

β is the mode of breakage of the material.

Q is the drop height at which the product did not break or broke in the fashion of laminated glass (ie level of containment provided)

6. Review of Previous Solutions

In the early days of the legislation many organisations only considered Risk Codes 1 and 2 as it was believed that these gave the greatest risk. However it has since been recognised that glazing in all the 'critical' locations can be of equal risk.

The most common upgrading method used was the installation of a safety film. Few organisations realise that this type of protection does have both a warranty period (in 1996 the standard warranty was 5 years however the current warranty period is typically 10 years) and a 'useful' lifetime (films from 1996 would be expected to have a lifetime of around 10 years again current films are now expected to last around 15 years).

There is a test method available which can indicate how well existing film installations can continue to perform. (For details please see the GGF Data Sheet 5.18.7 on Peel Testing)

However the biggest single problem that most organisations encounter is that the original assessment made was not detailed enough for today's needs. In many cases people just listed the work that needed undertaking. The assessment needs to be fully documented so that a continuous review can be undertaken to ensure that any changes to either the glazing or the use of the area do not create a new risk.

7. The Way Forward

The way forward is quite straightforward. The essential first step is to undertake a new full glazing audit to identify the types and

characteristics of glass in critical locations. This gives you all the information required to produce a full risk assessment taking into account all of the above factors. It should be recorded in such a way that there is a fully documented risk assessment and a separate schedule of work to be carried out to avoid any confusion. The Risk Assessment should be in such a format that makes it simple to check that the glazing continues to comply with the current Regulations.

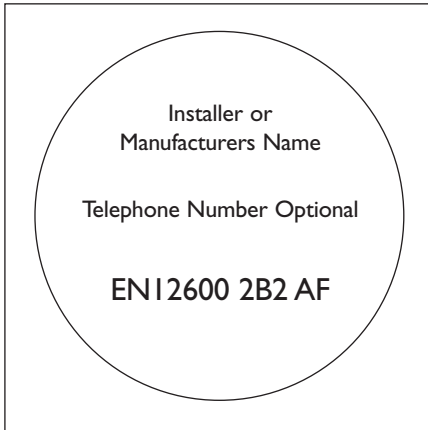
8. Safety Film Specification

When using a Safety Film (Safety Films are tested to the same level and in the same way as Safety Glass) to upgrade glazing there are two recognised levels of protection. Whilst the requirement for glass safety in 'critical locations' is EN12600 Class 3 (other than in and around doors of greater than 900mm width which requires Class 2) the standard 100 micron film will meet Class 2 when installed on 3mm, 4mm or 6mm glass [whether in a double glazed unit or not].

However also available is a 175 micron Safety Film which meets EN12600 Class 1.

This may be appropriate where the requirement is more robust in places such as Sports Halls or glazing in playground areas.

The standard safety films are clear and when installed professionally should be difficult to detect. However all glazing in Critical locations should be marked to indicate it is a 'safety material'. The marking on safety film should be installed onto the film in label form but in such a manner that it is not removable. The label should be approximately 25mm in diameter and include at least the information shown on the example label below.



Safety Films are also available in a 'solar control' version. These types of combined films may also reduce energy usage and will reduce solar heat gain and glare.

9. Disclaimer

Whilst every attempt has been 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 there from 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 therewith is hereby expressly disclaimed

BIBLIOGRAPHY

BS 6262-4:2005 Glazing for buildings.
Code of practice for safety related to human impact

BS EN 12600:2002 Glass in building.
Pendulum test. Impact test method and classification for flat glass.

Glass and Glazing Federation Data Sheet 5.18.7



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