

Bullet-resistant glazing —

Part 1: Specification for glazing for interior use

UDC 691.6:666.155:[.004.15 + .001.4]

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

BSI
Documents

AVA

Document Sharing Hub

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Elements and Components (of Diverse Materials) for Buildings Standards Committee (ECB/-) to Technical Committee ECB/4, upon which the following bodies were represented:

- Aluminium Window Association
- Architectural Aluminium Association
- British Adhesives and Sealants Association
- British Plastics Federation
- British Woodworking Federation
- Chief and Assistant Chief Fire Officers' Association
- Child Accident Prevention Trust
- Consumer Policy Committee of BSI
- Department of the Environment (Property Services Agency)
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Housing and Construction Industries)
- Department of Trade and Industry (Consumer Safety Unit, CA Division)
- Flat Glass Manufacturers' Association
- Glass and Glazing Federation
- Health and Safety Executive
- Incorporated Association of Architects and Surveyors
- Institution of Civil Engineers
- Institution of Fire Engineers
- Metal Window Federation Limited
- National Association of Shopfitters
- National House-building Council
- Patent Glazing Conference
- Royal Institute of British Architects
- Royal Institution of Chartered Surveyors
- Royal Society for the Prevention of Accidents
- Steel Window Association
- Union of Construction, Allied Trades and Technicians

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Association for Payment Clearing Services
- Association of British Insurers
- Association of Burglary Insurance Surveyors
- Banking Insurance and Finance Union
- British Security Industry Association
- Business Equipment and Information Technology Association
- City of London Police
- Home Office
- Metropolitan Police
- Ministry of Defence
- Plastics and Rubber Institute
- Post Office
- Society of Glass Technology
- Society of Motor Manufacturers and Traders Limited

This British Standard, having been prepared under the direction of the Elements and Components (of Diverse Materials) for Buildings Standards Committee, was published under the authority of the Board of BSI and comes into effect on 30 November 1988

© BSI 01-1999

First published October 1973
First revision November 1988

The following BSI references relate to the work on this standard:
Committee reference ECB/4
Draft for comment 85/13903 DC

ISBN 0 580 16528 0

Amendments issued since publication

Amd. No.	Date of issue	Comments

Contents

	Page
Committees responsible	Inside front cover
Foreword	ii
0 Introduction	1
1 Scope	1
2 Definitions	1
3 Classification of panels	2
4 Panel test pieces for type testing	2
5 Performance	2
6 Marking	3
Appendix A External weathering procedure for panel test pieces	4
Appendix B Procedure for type testing for performance requirements	5
Appendix C Installation of bullet-resistant glazing	5
Figure 1 — Limit of shelter from obstructions in an easterly, southerly or westerly direction	4
Table 1 — Conditions of test for panels	6
Publications referred to	Inside back cover

Foreword

This revision of BS 5051-1 was prepared under the direction of the Elements and Components (of Diverse Materials) for Buildings Standards Committee. It supersedes BS 5051-1:1973 which is withdrawn.

The title has been changed to distinguish bullet-resistant glazing from other kinds of security glazing, such as anti-bandit glazing resistant to manual attack (covered by BS 5544:1978).

Major changes include the introduction of a new category of glazing designed to protect against attack by a 5.56 mm calibre rifle, reclassification of the old G3 grade as R2 (designed to protect against attack by a 7.62 mm calibre rifle), and the introduction of a revised test for glazing resistant to shotgun attack.

Other changes include the deletion of imperial equivalent dimensions, the omission of barrel length requirements for test weapons, and the deletion of the old Appendix C (which gave details of specific systems of bullet velocity measurement). General information on velocity detection methods now appears in the notes to Table 1, and adjustments have been made to the tolerances on striking velocities.

Background information in the foreword of the last edition has been transferred to an introduction (see clause 0).

Requirements for through-vision and light transmission have been removed from the specification.

The committee considered it inadvisable to draw up detailed specifications for each type of bullet-resistant glazing known to be satisfactory because:

- a) these could not replace performance tests, and
- b) the subject continues to be in an active stage of development and it would be extremely difficult to keep such specifications comprehensive and up-to-date by including the new or improved materials that are becoming available or will do so in future.

Correct installation of bullet-resistant glazing is considered to be vital to its effectiveness. Attention is therefore drawn to BS 5357 which covers installation of security glazing, and to Appendix C of this standard, which details some essential installation requirements.

This British Standard calls for the use of procedures that may cause injury 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.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 6, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.