



SLOVENSKI STANDARD
SIST EN 12758:2004
01-september-2004

Steklo v stavbah – Steklo in izolirnost pred zvokom v zraku – Opis in opredelitev lastnosti

Glass in building - Glazing and airborne sound insulation - Product descriptions and determination of properties

Glas im Bauwesen - Glas und Luftschalldämmung - Definitionen und Bestimmung der Eigenschaften

Verre dans la construction - Vitrages et isolement acoustique - Descriptions de produits et détermination des propriétés

iTeh STANDARD PREVIEW
(standards.iteh.ai)
<https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004>

Ta slovenski standard je istoveten z: EN 12758:2002

ICS:

81.040.20	Steklo v gradbeništvu	Glass in building
91.120.20	Acoustics in building. Sound insulation	Acoustics in building. Sound insulation

SIST EN 12758:2004

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 12758:2004

<https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004>

EUROPEAN STANDARD

EN 12758

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2002

ICS 81.040.20; 91.120.20

English version

Glass in building - Glazing and airborne sound insulation - Product descriptions and determination of properties

Verre dans la construction - Vitrages et isolement
acoustique - Descriptions de produits et détermination des
propriétés

Glas im Bauwesen - Glas und Luftschalldämmung -
Definitionen und Bestimmung der Eigenschaften

This European Standard was approved by CEN on 28 March 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN 12758:2004](https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004)

<https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN 12758:2002 (E)

Contents

	page
Foreword.....	3
1 Scope	4
2 Normative references	5
3 Terms and definitions.....	6
4 Test methods.....	7
5 Sound insulation rating and classification	8
5.1 Sound insulation rating.....	8
5.2 Statement of acoustic performance of glass	8
5.3 Specification of glazing requirements.....	8
6 Typical performance data	8
Annex A (normative) Glazing recommendations.....	11
Bibliography	12

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 12758:2004](https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004)

<https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004>

Foreword

This document EN 12758:2002 has been prepared by Technical Committee CEN/TC 129 "Glass in building", the secretariat of which is held by IBN/BIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2003, and conflicting national standards shall be withdrawn at the latest by January 2003.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 12758:2004](#)

<https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004>

EN 12758:2002 (E)**1 Scope**

This European Standard assigns sound insulation values to all transparent, translucent and opaque glass products, described in European Standards on basic or processed glass products, when intended to be used in glazed assemblies in buildings, and which exhibit properties of acoustic protection, either as a prime intention or as a supplementary characteristic.

This document outlines the procedure, by which glass products may be rated, according to their acoustic performance which enables assessment of compliance with the acoustic requirements of buildings.

Rigorous technical analysis of measurement data remains an option, but this standard is intended to enable the derivation of simpler indices of performance, which can be adopted with confidence by non-specialists.

By adopting the principles of this standard, the formulation of acoustic requirements in Building Codes, and of product specification to satisfy particular needs for glazing is simplified.

It is recognised that the acoustic test procedures of EN ISO 140-1 and EN ISO 140-3 relate fully only to glass panes and their combinations. Although the same principles should be followed as closely as possible, it is inevitable that some compromises are necessary, because of the bulkier construction of other glazing types.

Guidelines on how to adapt these to include glass blocks, bricks, structural glazing, channel-shaped glass and pavers are offered in clause 4.

NOTE Performance variation in windows.

All the considerations of this standard relate to glass alone. Incorporation of them into windows may cause changes in acoustic performance, owing to other influences, including frame design, frame material, mounting method, air tightness, etc. Measurements of the sound insulation of complete windows (glass and frame) may be undertaken to resolve such issues.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

c31418d91f25/sist-en-12758-2004

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 572-1, *Glass in building - Basic soda-lime silicate glass products - Part 1: Definitions and general physical and mechanical properties.*

EN 572-2, *Glass in building - Basic soda-lime silicate glass products - Part 2: Float glass.*

EN 572-3, *Glass in building - Basic soda-lime silicate glass products - Part 3: Polished wired glass.*

EN 572-4, *Glass in building - Basic soda-lime silicate glass products - Part 4: Drawn sheet glass.*

EN 572-5, *Glass in building - Basic soda-lime silicate glass products - Part 5: Patterned glass.*

EN 572-6, *Glass in building - Basic soda-lime silicate glass products - Part 6: Wired patterned glass.*

EN 572-7, *Glass in building - Basic soda-lime silicate glass products - Part 7: Wired or unwired channel shaped glass.*

EN 1096-1, *Glass in building - Coated glass - Part 1: Definitions and classification.*

EN 1748-1, *Glass in building - Special basic products - Part 1: Borosilicate glasses.*

EN 1748-2, *Glass in building - Special basic products - Part 2: Glass ceramics.*

EN 1863-1, *Glass in building - Heat strengthened soda lime silicate glass - Part 1: Definition and description.*

EN 12150-1, *Glass in building - Thermally toughened soda lime silicate safety glass – Part 1: Definition and description.*

EN 12337-1, *Glass in building - Chemically strengthened soda lime silicate glass – Part 1: Definition and description.*

prEN 12488, *Glass in building – Assembly rules – Glazing systems and glazing requirements.*

EN ISO 140-1, *Acoustics - Measurement of sound insulation in buildings and of building elements - Part 1: Requirements for laboratory test facilities with suppressed flanking transmission (ISO 140-1:1997).*

EN ISO 140-3, *Acoustics - Measurement of sound insulation in buildings and of building elements - Part 3: Laboratory measurements of airborne sound insulation of building elements (ISO 140-3:1995).*

EN ISO 717-1, *Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne Sound Insulation (ISO 717-1:1996).*

EN ISO 12543-1, *Glass in building – Laminated glass and laminated safety glass – Part 1: Definitions and description of component parts (ISO 12543-1:1998).*

prEN 1051-1, *Glass in building - Glass blocks and glass paver units - Part 1: Definition, requirements, test methods and inspections.*

prEN 1051-2, *Glass in building - Glass blocks and glass paver units - Part 2: Evaluation of conformity/Product standard.*

EN 12758:2002 (E)

prEN 1279-1, *Glass in building - Insulating glass units - Part 1: Generalities, dimensional tolerances and rules for the system description.*

prEN 12725, *Glass in building - Glass block walls - Design, dimensioning and performance.*

prEN 13024-1, *Glass in building - Thermally toughened borosilicate safety glass – Part 1: Definition and description.*

prEN ISO 14439, *Glass in building – Glazing requirements – Use of glazing blocks (ISO/DIS 14439:2000).*

3 Terms and definitions

For the purposes of this European Standard the following terms and definitions apply.

3.1**glass products**

broad definition of product types can be only indicative, in recognition of future research, innovation and development of new materials and glazing techniques

3.2**single glass**

glass is referred to as single glass when the product is a single leaf of homogeneous or monolithic glass and includes annealed, toughened (by heat or chemical treatment) and coated glasses. Their body colour may vary, according to the presence of small additives at the production stage. See references EN 572-1, EN 572-2, EN 572-4, EN 572-5, EN 1748-1, EN 1748-2, EN 1863-1, EN 12150-1, EN 12337-1, prEN 13024-1, EN 1096-1

3.3**wired glass**

[SIST EN 12758:2004
https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004](https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004)

EN 572-3 and EN 572-6 define the essential characteristics of wired glass. The presence of wire is found not to modify the basic acoustic performance from that associated with homogeneous glass of the same overall thickness. For the purposes of this standard, wired glass is, therefore, included in the definition of "single glass"

3.4**laminated glass**

when leaves of homogeneous glass are permanently bonded together by the sandwiching of interlayers, the resultant product is referred to as laminated glass, and is defined in EN ISO 12543-1. The most common lamination material is polyvinyl butyral (p.v.b.). When referring to laminated glasses, the interlayer type and makeup shall be specified, owing to probable differentiation of acoustic performance

3.5**insulating glass units**

hermetically sealed units, having two or more glasses in their construction, separated by cavities, which usually contain dry air, but which may contain other gases for special purposes. They are referred to as insulating glass units (I.G.U.). Document prEN 1279-1 covers these variants. The individual glass components may comprise products from the categories of 3.2, 3.3 and 3.4

3.6**multiple glazing**

when two glasses are separated by unsealed cavities, they are referred to as coupled windows or double windows or, if held in proprietary framing, as secondary sashes. Generally the performance of those products should be tested

3.7

glass blocks and pavers

glass blocks and pavers are the subject of prEN 1051-1 and prEN 1051-2. Walls of glass blocks are covered by prEN 12725. Mostly, they are formed by fusing two halves together, so that they are fully sealed, though not with dry air. They are available in a wide range of sizes, quite often though of size 300 mm x 300 mm x 100 mm, and the glass thickness is of the order of 12 mm, which may be transparent, translucent and/or coloured, usually for decorative purposes. Because opposite faces of these products comprise thick glass, with significant separation, their associated sound insulation may be of importance. Pavers are products (most often rectangular or circular) which are primarily designed to be load-bearing to pedestrian or vehicular traffic. Their essential feature of interest to acoustic design is that they are fabricated from thick, solid glass

3.8

structural sealant glazing and structural assemblies

as an alternative to glass being held in position by framing, assemblies have been devised which may include bolts and/or adhesive fixing (with or without supporting structures) and are referred to as structural glazing assemblies. Acoustically, such assemblies may behave differently from their framed equivalents, and laboratory measurements of performance are strongly recommended, for which care must be taken to ensure that a representative sample of bolts, joints, etc., is included in the test sample

3.9

channel-shaped glass

document EN 572-7 covers these. Typically, these are about 3 m long and 300 mm wide, and shaped into a U-section, whose smaller arms are of the order of 50 mm long. Walls may be built of these components by joining them together, as a single or double skin, using a suitable flexible sealant. When the acoustic performance of such structures is required, testing of a representative sample of the particular configuration should be undertaken

4 Test methods

[SIST EN 12758:2004
https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004](https://standards.iteh.ai/catalog/standards/sist/ef15508a-b28e-477e-83b5-c31418d91f25/sist-en-12758-2004)

Acoustic performance data shall be obtained under the conditions specified by EN ISO 140-1, EN ISO 140-3 and EN ISO 717-1. For laminated glasses, owing to temperature dependency, the specimen temperature shall be between 17 °C and 23 °C.

NOTE 1 For best reproducibility it is recommended that the test opening for glass panes, as described in annex C of EN ISO 140-1:1997, be adopted.

Some variation in panel size etc., to those in EN ISO 140-1, may be necessary for glass blocks, pavers, structural assemblies and channel-shaped glass, in order to include a valid representation of all their features, as referred to in clause 1, and as described in 3.6, 3.7, 3.8 and 3.9.

Acoustic measurements of the performance of these products shall be made on assemblies or arrays of them, and not of individual elements. Factors which influence testing are size, jointing, etc.

NOTE 2 For large mixed components it may be more appropriate to employ intensity measurement techniques, according to the advice of a specialist.

Test reports on the sound insulation of glazing shall be obtained from measurements made under the conditions specified in EN ISO 140-1 and EN ISO 140-3 or, as closely as possible, for some unconventional glazings, as acknowledged above. In all cases, constructional details shall be included, with statements, where appropriate, of:

- a) type of glass;
- b) glass thickness(es);
- c) airspace(s)/cavity width(s);
- d) gas filling - type and concentration;