



SLOVENSKI STANDARD

kSIST FprEN 12758:2010

01-september-2010

Steklo v gradbeništvu - 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

Ta slovenski standard je istoveten z: FprEN 12758

ICS:

81.040.20	Steklo v gradbeništvu	Glass in building
91.120.20	Akustika v stavbah. Zvočna izolacija	Acoustics in building. Sound insulation

kSIST FprEN 12758:2010

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

FINAL DRAFT
FprEN 12758

June 2010

ICS 81.040.20; 91.120.20

Will supersede EN 12758:2002

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

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (FprEN 12758:2010) has been prepared by Technical Committee CEN/TC 129 “Glass in building”, the secretariat of which is held by NBN.

This document is currently submitted to the Unique Acceptance Procedure.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

FprEN 12758:2010 (E)**1 Scope**

This European Standard assigns sound insulation values to all transparent, translucent and opaque glass products, described in the European Standards for basic, special 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 for product specification to satisfy particular needs for glazing is simplified.

It is recognised that the acoustic test procedures contained within EN ISO 140-1 and EN ISO 140-3 relate 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, e.g. glass blocks, paver units, channel-shaped glass, structural glazing and structural sealant glazing. Guidelines on how to adapt the test procedures for these glazing types are offered in Clause 4.

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

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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 1051-1, *Glass in building — Glass blocks and glass pavers — Part 1: Definitions and description*

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

EN 1279-1, *Glass in Building — Insulating glass units — Part 1: Generalities, dimensional tolerances and rules for the system description*

EN 1748-1-1, *Glass in building — Special basic products — Borosilicate glasses — Part 1-1: Definition and general physical and mechanical properties*

EN 1748-2-1, *Glass in building — Special basic products — Glass ceramics — Part 2-1 Definitions and general physical and mechanical properties*

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*

EN 13024-1, *Glass in building — Thermally toughened borosilicate safety glass — Part 1: Definition and description*

EN 14178-1, *Glass in building — Basic alkaline earth silicate glass products — Part 1: Float glass*

EN 14179-1, *Glass in building — Heat soaked thermally toughened soda lime silicate safety glass — Part 1: Definition and description*

EN 14321-1, *Glass in building — Thermally toughened alkaline earth silicate safety glass — Part 1: Definition and description*

prEN 15681-1, *Glass in building — Basic alumino silicate glass products — Part 1: Definitions and general physical and mechanical properties*

prEN 15682-1, *Glass in building — Heat soaked thermally toughened alkaline earth silicate safety glass — Part 1: Definition and description*

prEN 15683-1, *Glass in building — Thermally toughened soda lime silicate channel shaped safety glass — Part 1: Definition and description*

EN ISO 140-1:1997, *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 140-3:1995, *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 717-1:1996, *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)*

EN ISO 12543-2, *Glass in building — Laminated glass and laminated safety glass — Part 2: Laminated safety glass (ISO 12543-2:1998)*

EN ISO 12543-3, *Glass in building — Laminated glass and laminated safety glass — Part 3: Laminated glass (ISO 12543-3:1998)*

EN ISO 12543-5, *Glass in building — Laminated glass and laminated safety glass — Part 5: Dimensions and edge finishing (ISO 12543-5:1998)*

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ISO 140-2:1991, *Acoustics — Measurement of sound insulation in buildings and of building elements — Part 2: Determination, verification and application of precision data*

ISO 16940, *Glass in building — Glazing and airborne sound insulation — Measurement of the mechanical impedance of laminated glass*

3 Terms, definitions and symbols**3.1 Terms****3.1.1****glass product**

product manufactured from glass, i.e. basic glass, special basic glass, processed glass, for use in buildings/constructions

NOTE See Clause 4.

3.1.2**glazed assembly**

combination of frame/support and glass product used for the determination of the acoustic performance

NOTE 1 The following are examples of such assemblies:

- 1) Glass block walls;
- 2) Paver unit panels;
- 3) Channel shaped glass panels, single or dual glazed;
- 4) Structural sealant glazing;
- 5) Structural assemblies.

NOTE 2 The dimensions of glass blocks, paver units and channel shaped glass do not allow them to be subjected to the standard test regime.

NOTE 3 Structural sealant glazing: is a 'frameless' glazing system that uses structural sealant to restrain the glazing. This method of restraint will influence the acoustic performance of the glass product.

NOTE 4 Structural assemblies consist of glass products that are connected by bolted metal fittings to one another and to structural supports, e.g. fin, etc.

3.2 Definitions

For the purposes of this document, the definitions in EN ISO 140-1:1997 and -3:1995, ISO 140-2:1991 and EN ISO 717-1:1996 together with the following apply:

3.2.1**single glazing**

single pane of glass, that includes annealed, strengthened/toughened (by heat or chemical treatment), laminated/laminated safety and coated glasses, that is glazed into an opening

3.2.2**multiple glazing**

two or more panes of glass that are separated by cavities either sealed or unsealed

NOTE 1 Multiple glazing incorporating hermetically sealed cavities, e.g. double glazing, triple glazing, etc., and are known as Insulating Glass Units.