BS EN 572-6:2012

BSI Standards Publication

Glass in building — Basic soda lime silicate glass products

Part 6: Wired patterned glass

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National foreword

This British Standard is the UK implementation of EN 572-6:2012. It supersedes BS EN 572-6:2004 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/520/1, Basic and transformed glass products.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

ISBN 978 0 580 76530 8

ICS 81.040.20

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2012.

Amendments issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 572-6

July 2012

ICS 81.040.20

Supersedes EN 572-6:2004

English Version

Glass in building - Basic soda lime silicate glass products - Part 6: Wired patterned glass

Verre dans la construction - Produits de base: verre de silicate sodo-calcique - Partie 6: Verre imprimé armé

Glas im Bauwesen - Basiserzeugnisse aus Kalk-Natronsilicatglas - Teil 6: Drahtornamentglas

This European Standard was approved by CEN on 11 May 2012.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. EN 572-6:2012: E

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Foreword

This document (EN 572-6:2012) has been prepared by Technical Committee CEN/TC 129 “Glass in building”, the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by January 2013, and conflicting national standards shall be withdrawn at the latest by January 2013.

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This document supersedes EN 572-6:2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This edition is a revision of EN 572-6:2004. The main change in this edition is a new method of determination of squareness.

This European Standard “*Glass in building — Basic soda lime silicate glass products*” consists of the following parts:

— Part 1: Definitions and general physical and mechanical properties;

— Part 2: Float glass;

— Part 3: Polished wired glass;

— Part 4: Drawn sheet glass;

— Part 5: Patterned glass;

— Part 6: Wired patterned glass;

— Part 7: Wired or unwired channel shaped glass;

— Part 8: Supplied and final cut sizes;

— Part 9: Evaluation of conformity/Product standard.

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1 Scope

This European Standard specifies dimensional and minimum quality requirements (in respect of optical and visual faults) for wired patterned glass, as defined in EN 572-1:2012, for use in building.

This European Standard applies only to wired patterned glass supplied in rectangular panes and in stock sizes.

EN 572-8 gives information on patterned wired glass in sizes other than those covered by this European Standard.

2 Normative references

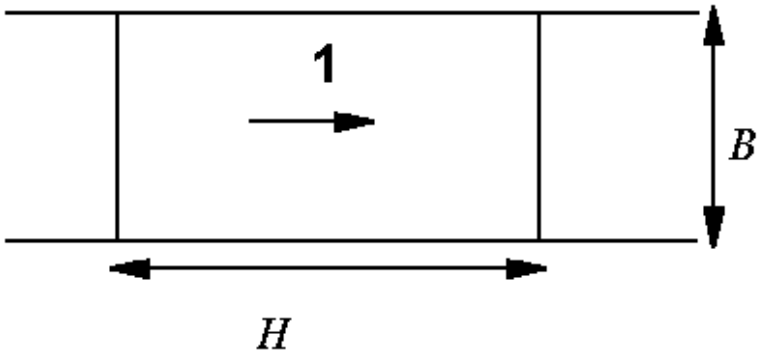
The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 572-1:2012, *Glass in building — Basic soda lime silicate glass products — Part 1: Definitions and general physical and mechanical properties*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 572-1:2012 and the following apply.

3.1
length, H, and width, B
defined with reference to the direction of draw of the glass ribbon as shown in Figure 1



Key
1 direction of draw

Figure 1 — Relationship between length, width and direction of draw

3.2
stock sizes
glass delivered in the following sizes:

– nominal length H: 1 380 mm to 4 500 mm;

– nominal width B: 1 500 mm to 2 520 mm

3.3
visual fault
fault which alters the visual quality of the glass

Note 1 to entry: Visual faults include spot faults, linear/extended faults, pattern faults and wire faults.

3.4
spherical or quasi-spherical spot fault
spot fault whose larger dimension is less than or equal to twice the smaller dimension

3.5
elongation spot fault
fault whose larger dimension is more than twice the smaller dimension

3.6
linear/extended fault
fault which can be on or in the glass, in the form of deposits, marks or scratches which occupy an extended length or area

3.7
pattern fault
deviation of the pattern relative to a reference, e.g. line or straight edge

3.8
deviation of the pattern
deviation, x, of the pattern

3.9
wire fault
deviations of the wire, penetration of the glass surface by the wire or break in the wire in the body of the glass

3.10
deviation of the wire
deviation, y, of the wire relative to a reference, e.g. line or straight edge

4 Dimensional requirements

4.1 Thickness

4.1.1 General

The actual thickness shall be the average of four measurements, taken to the nearest 0,01 mm, each one taken at the thickest and closest point to the centre of each side. Measurement shall be by means of an instrument of the plate gauge type with a diameter of (50 ± 5) mm.

NOTE The mechanical resistance of wired patterned glass is a function of the pattern as well as the thickness.

4.1.2 Tolerances

The actual thickness rounded to the nearest 0,1 mm shall not vary from the nominal thickness by more than the tolerances shown in Table 1.

Table 1 — Tolerances on nominal thickness

Dimensions in millimetres

Nominal thickness	Tolerances
6	± 0,6
7	± 0,7
8	± 0,8
9	+1,5 / -1,0

4.2 Length, width and squareness

The tolerances, t, on nominal dimensions length, H, and width, B, are ± 5 mm.

The limits of squareness are described by deviation between diagonals. Such limits are given in Table 2.

Table 2 — Limit on the difference between diagonals

Dimensions in millimetres

Nominal glass thickness, d	Limit on the difference between diagonals		
	Stock sizes – Splits		
	$(H, B) \leq 1\,500$	$1\,500 < (H, B) \leq 3\,000$	$(H, B) > 3\,000$
6, 7, 8, 9	3	4	5

4.3 Wire mesh

This is a square steel mesh welded at all intersections of approximate dimensions 12,5 mm or 25,0 mm, manufactured from wire of diameter ≥ 0,42 mm.

5 Quality requirements

5.1 General

One quality level is considered in this European Standard. This is determined by evaluation of the visual faults.

There are three different types of pattern faults considered which may occur simultaneously. They are shown in Figure 2 and are

a) out of square;

b) waviness;

c) bow.

There are three different types of deviation of the wire considered which may occur simultaneously.

They are shown in Figure 3 and are

d) out of square,

e) waviness,

f) bow.

5.2 Methods of observation and measurement

5.2.1 Spot and linear/extended faults

The glass pane to be examined is illuminated in conditions approximating to diffuse daylight and is observed in front of a matt grey screen.

Place the pane of glass to be examined vertically 3 m in front of the parallel to the screen. Arrange the point of observation 1,5 m from the glass, keeping the direction of observation normal to the glass surface.

View the pane of glass, and note the presence of visually disturbing faults.

a) Spot faults

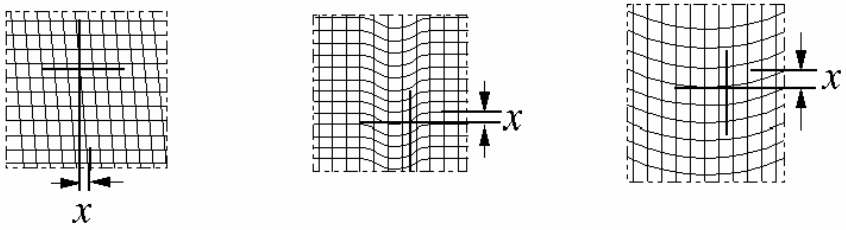
Measure the dimensions of these faults with a micrometer with graduations in tenths of a millimetre. Note the number, dimensions and concentration of the spot faults.

b) Linear/extended faults

Note the number of these faults.

5.2.2 Pattern faults

A reference, e.g. line or straight edge, is placed on the glass as shown in Figure 2. The deviation, x, of the pattern in relation to this reference is measured.



a) Out of square **b) Waviness** **c) Bow**

NOTE The scale of these drawings has been exaggerated in order to be explicit about the types of deviation.

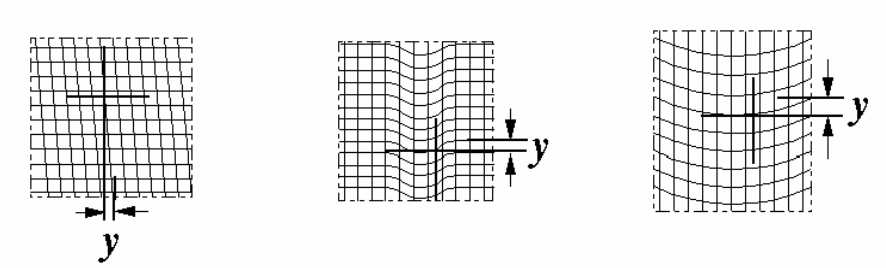
Figure 2 — Representations of the type of pattern faults

5.2.3 Wire faults

A reference, e.g. line or straight edge, is placed parallel to the direction of the wires. The deviation, y, of the wire in relation to this reference is measured (see Figure 3).

Any penetration of the glass surface by the wire is noted.

Any breaks in the wire are noted.



a) Out of square **b) Waviness** **c) Bow**

NOTE The scale of these drawings has been exaggerated in order to be explicit about the types of deviation.

Figure 3 — Representations of the types of wire faults

5.3 Acceptance levels

5.3.1 Spot faults

Spot faults are categorized and found to be acceptable or not acceptable as follows:

a) Spherical and quasi-spherical spot faults:

   1) If the larger dimension is ≤ 2,0 mm, they are acceptable without restriction;

   2) If the larger dimension is > 2,0 mm and ≤ 5,0 mm, they are acceptable up to 2 in any 1 m × 1 m area;.

   3) They are not acceptable if the larger dimension is > 5,0 mm.

b) Elongated spot faults of width ≤ 2,0 mm:

   1) If their length is ≤ 4,0 mm, they are acceptable without restriction;

   2) If their length is > 4,0 mm and ≤ 25,0 mm, they are acceptable if the sum of the lengths is ≤ 100 mm in any 1 m × 1 m area;

   3) They are not acceptable if the length is > 25,0 mm.

c) Elongated spot faults of width > 2,0 mm:

   1) If the larger dimension is ≤ 8,0 mm, they are acceptable up to 2 in any 1 m × 1 m area;

   2) They are not acceptable if the larger dimension is > 8,0 mm.

5.3.2 Linear/extended faults

The allowable number of faults is an average of 0,05 faults in 20 m² of glass related to at least 20 tonnes.

5.3.3 Pattern faults

The deviation of the pattern, x, (see Figure 2) shall not exceed 12 mm per metre.

5.3.4 Wire faults

The deviation, y, (see Figure 3) shall not exceed 15 mm per metre.

NOTE The deformation of the wires of each square of the mesh is not considered.

No penetration of the surface is acceptable.

A break in the wire is acceptable only if it does not affect vision in a disturbing manner under the conditions of observation described in 5.2.1.

6 Designation

Wired patterned glass in compliance with this European Standard shall be designated respectively by

— type (mesh size),

— reference to this European Standard,

— tint (manufacturer's reference) or clear,

— pattern (manufacturer's reference),

— nominal thickness in mm,

— nominal length, H, and width, B, in mm..

EXAMPLE Wired patterned glass (12,5 mm), pattern reference 'PATTERN', clear, thickness 7 mm, length 3,30 m, width 1,80 m, intended for use in building, is designated as follows:

Wired patterned glass (12,5 mm) - EN 572-6 - clear 'PATTERN', 7 mm, 3 300 mm × 1 800 mm

Bibliography

[1] EN 572-8, *Glass in building — Basic soda lime silicate glass products — Part 8: Supplied and final cut sizes*

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