



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 12543-6:2020**  
**01-april-2020**

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**Steklo v gradbeništvu - Lepljeno steklo in lepljeno varnostno steklo - 6. del: Videz (ISO/DIS 12543-6:2020)**

Glass in building - Laminated glass and laminated safety glass - Part 6: Appearance (ISO/DIS 12543-6:2020)

Glas im Bauwesen - Verbundglas und Verbund-Sicherheitsglas - Teil 6: Aussehen (ISO/DIS 12543-6:2020)

Verre dans la construction - Verre feuilleté et verre feuilleté de sécurité - Partie 6: Aspect (ISO/DIS 12543-6:2020)

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**Ta slovenski standard je istoveten z: prEN ISO 12543-6**

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**ICS:**

81.040.20      Steklo v gradbeništvu      Glass in building

**oSIST prEN ISO 12543-6:2020**      **en,fr,de**

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# DRAFT INTERNATIONAL STANDARD

## ISO/DIS 12543-6

ISO/TC 160/SC 1

Secretariat: BSI

Voting begins on:  
2020-01-20Voting terminates on:  
2020-04-13

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## Glass in building — Laminated glass and laminated safety glass —

### Part 6: Appearance

*Verre dans la construction — Verre feuilleté et verre feuilleté de sécurité —  
Partie 6: Aspect*

ICS: 81.040.20

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Reference number  
ISO/DIS 12543-6:2020(E)

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Published in Switzerland

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### Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 160, *Glass in building* Subcommittee SC 1, *Product considerations*.

This third edition cancels and replaces the second edition (ISO 12543-6:2011), which has been technically revised.

The main changes compared to the previous edition are as follows:

- Editorial changes
- ....

A list of all parts in the ISO 12543 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Glass in building — Laminated glass and laminated safety glass —

## Part 6: Appearance

### 1 Scope

This part of ISO 12543 specifies defects of finished sizes and test methods with regard to the appearance of laminated glass when looking through the glass.

NOTE Special attention is paid to acceptability criteria in the vision area.

This International Standard is applicable to finished sizes at the time of supply.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 12543-1, *Glass in building — Laminated glass and laminated safety glass — Part 1: Definitions and description of component parts*

ISO 12543-5:2019, *Glass in building — Laminated glass and laminated safety glass — Part 5: Dimensions and edge finishing*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12543-1:2019, ISO 12543-2:2019 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

#### 3.1

##### **spot defect**

type of defect that includes opaque spots, bubbles and foreign bodies

#### 3.2

##### **linear defect**

type of defect includes foreign bodies and scratches or grazes

#### 3.3

##### **other defect**

glass defects such as vents, and interlayer defects such as creases, shrinkage and streaks

**ISO/DIS 12543-6:2020(E)****3.4****opaque spot**

visible defects in the laminated glass

Note 1 to entry: For example, tin marks and inclusions in the glass or interlayer.

**3.5****bubble**

usually air, in the glass or interlayer

**3.6****foreign body**

unwanted item introduced into the laminated glass during manufacture

**3.7****scratch**

linear damage to the outside surface of the laminated glass

**3.8****graze**

damage to the outside surface of the laminated glass

**3.9****vent**

sharp tipped fissure or crack running into the glass from an edge

**3.10****crease**

distortion introduced into the interlayer by folds visible after manufacture

**3.10****streak due to interlayer inhomogeneity**

distortion in the interlayer, caused by manufacturing defects in the interlayer, that are visible after manufacture

**3.11****edge area**

the perimeter of the pane which is generally contained within the glazing system

Note 1 to entry: For pane sizes that are less than 5 m<sup>2</sup>, the width of the edge area as given in [Figure 1](#) is 15 mm. The width of the edge area is increased to 20 mm for pane sizes that are greater than 5 m<sup>2</sup>.

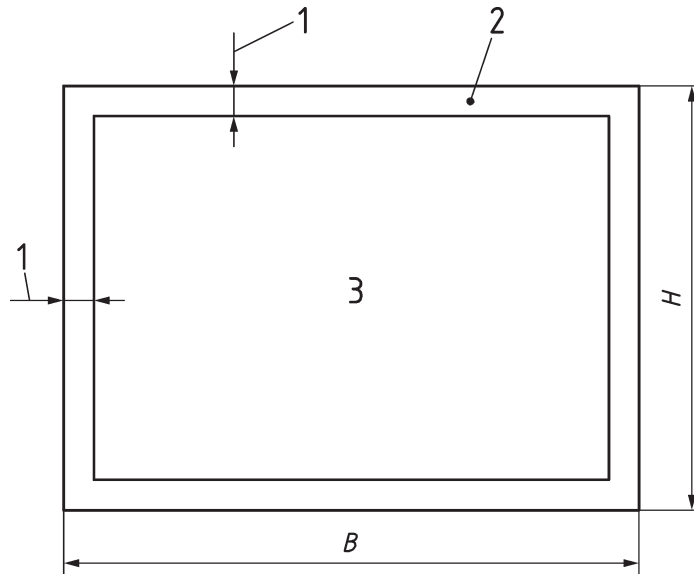
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**Key**

- $B$  Width
- $H$  Length
- 1 width of edge area
- 2 edge area
- 3 main area

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**Figure 1 — Areas to be examined on finished sizes ready for glazing**

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**3.11****edge area**

the perimeter of the pane which is generally contained within the glazing system

**4 Principle**

The laminated glass is put in a vertical position, in front of and parallel to a matt grey screen, and is lit by diffuse daylight or equivalent.

The laminated glass is visually inspected perpendicularly at a distance of two metres from the glass, with the matt screen on the other side of the glass.

Any visible defects that are disturbing shall be marked.

An alternative method of observation by pack is given in [Annex A](#).

**5 Defects in the edge area for framed edges**

When inspected according to the test method given in [Clause 4](#), defects which do not exceed 5 mm in diameter or 5 % to the edge area are permitted.

**6 Vents**

Vents are not permitted.

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## 7 Creases and streaks

These are not allowed in the visual area.

## 8 Defects in the vision area

### 8.1 Spot defects in the vision area

When inspected according to the test method given in [Clause 4](#), the admissibility of spot defects depends on the following:

- size of the defect;
- frequency of the defect;
- number of panes as components of a laminated glass.

The number of permissible defects in a pane shall be in accordance with [Table 1](#).

Defects less than 0,5 mm shall not be considered.

Defects greater than 3 mm shall not be permitted.

NOTE Admissibility of spot defects in laminated glass is independent of the individual glass thickness.

**Table 1 — Permissible spot defects in the vision area**

Size of defect <i>d</i> mm	0,5 < <i>d</i> ≤ 1,0		1,0 < <i>d</i> ≤ 3,0			
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Size of pane <i>A</i> m <sup>2</sup>	for all sizes		<i>A</i> ≤ 1	1 < <i>A</i> ≤ 2	2 < <i>A</i> ≤ 8	<i>A</i> > 8
Number of permissible defects	2 panes	no limitation,	1			
	3 panes	however no	2			
	4 panes	accumulation	3			
	≥ 5 panes	of defects	4			

NOTE An accumulation of defects occurs if four or more defects are at a distance of < 200 mm from each other. This distance is reduced to 180 mm laminated glass consisting of three panes, to 150 mm laminated glass consisting of four panes and to 100 mm laminated glass consisting of five or more panes.

The number of permissible defects in [Table 1](#) shall be increased by one for each individual interlayer which is thicker than 2 mm.

### 8.2 Linear defects in the vision area

When inspected according to the test method given in [Clause 4](#) linear defects are allowed as given in [Table 2](#).

**Table 2 — Number of permissible defects in the vision area**

Area of pane m <sup>2</sup>	Number of permissible defects > 30 mm in length <sup>a</sup>
≤ 5 m <sup>2</sup>	not allowed
5 to 8 m <sup>2</sup>	1

<sup>a</sup> Linear defects less than 30 mm in length are allowed.