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TOLERANTSID JA VISUAALNE KVALITEET

Glass in Building - Insulating glass units - Part 1:
Generalities, system description, rules for substitution,
tolerances and visual quality

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 1279-1:2018 sisaldab Euroopa standardi EN 1279-1:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 1279-1:2018 consists of the English text of the European standard EN 1279-1:2018.
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English Version

**Glass in Building - Insulating glass units - Part 1:
Generalities, system description, rules for substitution,
tolerances and visual quality**

Verre dans la construction - Vitrage isolant - Partie 1 :
Généralités, description du système, règles de
substitution, tolérances et qualité visuelle

Glas im Bauwesen - Mehrscheiben-Isolierglas - Teil 1:
Allgemeines, Systembeschreibung, Austauschregeln,
Toleranzen und visuelle Qualität

This European Standard was approved by CEN on 9 March 2018.

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European foreword

This document (EN 1279-1:2018) 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of an identical text or by endorsement, at the latest by January 2019 and conflicting national standards shall be withdrawn at the latest by January 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1279-1:2004.

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

The main changes in comparison with the previous edition include:

- a) Example of system descriptions was added;
- b) Annex B: examples of IGU systems were transferred from part 6;
- c) Annex C compatibility of components was added;
- d) Annex D: rules to substitute materials and components were revised and combined in this part;
- e) Annex F: visual appearance requirements were added.

EN 1279, *Glass in Building - Insulating glass units* consists of the following parts:

- *Part 1: Generalities, system description, rules for substitution, tolerances and visual quality;*
- *Part 2: Long term test method and requirements for moisture penetration;*
- *Part 3: Long term test method and requirements for gas leakage rate and for gas concentration tolerances;*
- *Part 4: Methods of test for the physical attributes of edge seal components and inserts;*
- *Part 5: Product standard;*
- *Part 6: Factory production control and periodic tests.*

This standard is written on the assumption of a 25 year period of use for IGUs.

No warranty can be derived thereof for the variety of different IGU designs, manufacturing procedures and particularly with regard to glazing situations. To ensure the full suitability and durability of new IGU designs or special product variants additional tests of components and/or IGUs may be required.

This means, that the described test procedures and all requirements of this standard, including factory production control, were worked out with the understanding that all values for characteristic's performances can be kept under relevant glazing situations in window and facades for this period without significant change.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document (all parts) covers the requirements for insulating glass units. The main intended uses of the insulating glass units are installations in windows, doors, curtain walling, bonded glazing for doors, windows and curtain walling, roofs and partitions.

The achievement of the requirements of this standard indicates that insulating glass units fulfil the needs for intended use and ensures by means of the evaluation of conformity to this standard that, visual, energetic, acoustic, safety parameters do not change significantly over time.

In cases where there is no protection against direct ultraviolet radiation or permanent shear load on the edge seal, as in bonded glazing for doors, windows and curtain walling systems, it is essential to follow additional European Technical Specifications (see EN 15434, EN 13022-1 and prEN 16759).

Insulating glass units that are intended for artistic purposes (e.g. lead glass or fused glass) are excluded from the scope of this standard.

Vacuum insulating glass is not covered by this standard (see ISO DIS 19916-1).

Glass/plastics composites are under the scope as long as the surface of contact with sealants is a glass component.

NOTE For glass products with electrical wiring or connections for, e.g. alarm or heating purposes, other directives, e.g. Low Voltage Directive, may apply.

This European Standard gives definitions for insulating glass units and covers the rules for the system description, the optical and visual quality and the dimensional tolerances thereof and describes the substitution rules based on an existing system description.

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.

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

EN 1279-2:2018, *Glass in building - Insulating glass units - Part 2: Long term test method and requirements for moisture penetration*

EN 1279-3:2018, *Glass in building - Insulating glass units - Part 3: Long term test method and requirements for gas leakage rate and for gas concentration tolerances*

EN 1279-4:2018, *Glass in building - Insulating glass units - Part 4: Methods of test for the physical attributes of edge seal components and inserts*

EN 1279-5:2018, *Glass in building - Insulating glass units -Part 5: Product standards*

EN 1279-6:2018, *Glass in building - Insulating glass units - Part 6: Factory production control and periodic tests*

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

EN 13022-1, *Glass in building - Structural sealant glazing - Part 1: Glass products for structural sealant glazing systems for supported and unsupported monolithic and multiple glazing*

ISO 11485-1, *Glass in building - Curved glass - Part 1: Terminology and definitions*

ISO 11485-2, *Glass in building - Curved glass - Part 2: Quality requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

3.1

insulating glass unit

IGU

assembly consisting of at least two panes of glass, separated by one or more spacers, hermetically sealed along the periphery, mechanically stable and durable (as specified in 6.1)

3.1.1

IGU type A

IGU, when used for installation without permanent shear load in the sealant and protected against direct UV exposure on edge seal

3.1.2

IGU type B

IGU, when used for installation with at least one edge not completely protected against direct UV radiation without permanent shear load in the sealant

3.1.3

IGU type C

IGU when used for installation as bonded glazing for doors, windows and curtain walling with possible permanent shear load on edge sealant with or without direct UV radiation exposure

Note 1 to entry: Permanent shear load can be avoided by mechanical support to carry the weight.

Note 2 to entry: For IGU type B and C additional requirements in accordance with EN 15434 and EN 13022-1 may apply.