

Bonding sealants - Part 1: Bonded glazing sealants for direct light exposure

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 15434-1:2023 sisaldab Euroopa standardi EN 15434-1:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 15434-1:2023 consists of the English text of the European standard EN 15434-1:2023.
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English Version

Bonding sealants - Part 1: Bonded glazing sealants for direct light exposure

Mastics de collage - Partie 1 : Mastics de scellement
et/ou de collage en exposition direct à la lumière

Klebende Dichtstoffe - Teil 1: Klebende Dichtstoffe für
Glaskonstruktionen

This European Standard was approved by CEN on 3 March 2023.

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European foreword

This document (EN 15434-1:2023) has been prepared by Technical Committee CEN/TC 349 “Sealants for joints in building construction”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by October 2023, and conflicting national standards shall be withdrawn at the latest by October 2023.

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 15434:2006+A1:2010.

The main changes compared to the previous edition are listed below:

- clauses prepared for the purposes of the Construction Products Directive (CPD) were deleted;
- updated technically and improved editorially.

This document is one part of the product European Standards within the EN 15434 series on *Bonding sealants*.

This document is one of a series of interrelated standard parts dealing with:

- glass products for bonded sealant glazing systems;
- installation of glass products in a bonded manner on building facades;
- bonding sealants.

The interrelated parts are:

- 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*;
- EN 13022-2, *Glass in building — Structural sealant glazing — Part 2: Assembly rules*.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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

1 Scope

This document covers the requirements for, and testing of sealants for use in one or more of the following applications:

- a) Manufacturing of insulating glass units where direct ultraviolet resistance and mechanical resistance (bonding use) of the insulating glass edge seal are required;
- b) Manufacturing of factory-made bonded sealant glazing elements when referred to by the relevant European Standards and/or European Technical Approval Guidelines;
- c) Assembling of glass products into or onto supports, where also direct ultraviolet resistance and/or mechanical resistance (bonding use) of the seal are required, under controlled environmental conditions as described in EN 13022-2.

This document covers the evaluation of conformity and the factory production control with respect to the production of sealants in conformity with this document.

This document describes the role of sealants that are in conformity with this document, with respect to sealing and bonding.

This document does not apply to sealants for the manufacture of insulating glass units where the seal is fully protected, i.e. by a frame, from ultraviolet radiation.

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 572-1:2012+A1:2016, *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 1279-1, *Glass in Building - Insulating glass units - Part 1: Generalities, system description, rules for substitution, tolerances and visual quality*

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 ISO 6927, *Buildings and civil engineering sealants - Vocabulary (ISO 6927)*

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*

EN 13022-2, *Glass in building - Structural sealant glazing - Part 2: Assembly rules*

EN ISO 527-3:2018, *Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets (ISO 527-3:2018)*

EN ISO 868, *Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868)*

EN ISO 1183-1, *Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method (ISO 1183-1)*

EN ISO 4892-2, *Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps (ISO 4892-2)*

EN ISO 7389:2003, *Building construction - Jointing products - Determination of elastic recovery of sealants (ISO 7389:2002)*

EN ISO 8339:2005, *Building construction - Sealants - Determination of tensile properties (Extension to break) (ISO 8339:2005)*

EN ISO 9227, *Corrosion tests in artificial atmospheres - Salt spray tests (ISO 9227)*

EN ISO 10563, *Buildings and civil engineering works - Sealants - Determination of change in mass and volume (ISO 10563)*

EN ISO 11358-1:2022, *Plastics - Thermogravimetry (TG) of polymers - Part 1: General principles (ISO 11358-1:2022)*

EN ISO 11600, *Building construction - Jointing products - Classification and requirements for sealants (ISO 11600)*

EN ISO 11925-2, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2)*

EN 16759, *Bonded Glazing for doors, windows and curtain walling - Verification of mechanical performance of bonding on aluminium and steel surfaces*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 11600, EN 13022-1, EN 13022-2, EN 1279-1 and EN ISO 6927 and the following apply.

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

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

3.1

cure

irreversible transformation of a sealant from a liquid or paste-like state into a hardened or rubber-like solid state

3.2

initial cure

stage in the curing where sealant has appropriate cohesive strength to resist to different levels of action/loads

3.3

bonding

joining elements with as result transfer of imposed loads (permanent or variable actions) to the support frame

3.4

significant change

variation in performance beyond the permitted tolerance for the characteristic