RIPPFASSAADID. TOOTESTANDARD

Curtain walling - Product standard

EESTI STANDARDIKESKUS
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NATIONAL FOREWORD

See Eesti standard EVS-EN 13830:2015 sisaldab Euroopa standardi EN 13830:2015 ingliskeelset teksti.	This Estonian standard EVS-EN 13830:2015 consists of the English text of the European standard EN 13830:2015.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 29.04.2015.	Date of Availability of the European standard is 29.04.2015.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 91.060.10

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13830

April 2015

ICS 91.060.10

Supersedes EN 13830:2003

English Version

Curtain walling - Product standard

Façades rideaux - Norme de produit

Vorhangfassaden - Produktnorm

This European Standard was approved by CEN on 7 February 2015.

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Ref. No. EN 13830:2015 E

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Foreword

This document (EN 13830:2015) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hadware and curtain walling”, 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of an identical text or by endorsement, at the latest by October 2015, and conflicting national standards shall be withdrawn at the latest by January 2017.

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

This document supersedes EN 13830:2003.

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 EU Directive(s).

For relationship with EU Directive, see informative Annexe ZA, which is an integral part of this document.

The new revision extends the scope to sloping parts included in the curtain walling kit and clarifies the exclusion of the following products:

- “Patent glazing” (glazed sloping roofs) kits;
- Roof glazing constructions;
- Façades made of precast concrete panels as part of the wall (see EN 14992).

Here below the list the most important changes compared with the previous version EN 13830:2003:

- new characteristics were added;
- new annexes were introduced, particularly the one for the range of direct application of characteristics (extension rules);
- the durability was dealt in details in Annex I;
- updated Clause 6 and Annex ZA with the provisions of the EU Construction Product Regulation No. 305/2011.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This European Standard specifies the technical characteristics of curtain walling kit and includes a systematic framework of requirements, test methods and compliance criteria to allow the product to fulfil with it.

Curtain walling kit might not be completed in all respects within a manufacturing area, and some kit components could be supplied separately on site. Curtain walling kit could be also preassembled in plant(s) as prefabricated units.

1 Scope

This European Standard specifies requirements of curtain walling kit intended to be used as a building envelope to provide weather resistance, safety in use and energy economy and heat retention and provides test/assessments/calculation methods and compliance criteria of the related performances.

The curtain walling kit covered by this standard should fulfil its own integrity and mechanical stability but does not contribute to the load bearing or stability of the main building structure, and could be replaced independently of it.

This standard applies to curtain walling kit ranging from a vertical position to ± 15° from the vertical. Any sloping parts should be contained within the curtain walling kit.

This standard is applicable to the whole of the curtain walling kits, including the fixings.

Curtain walling according to this standard is intended to be used as part of the building envelope.

This European Standard does not include:

— “Patent glazing” (glazed sloping roofs) kits;

— Roof glazing constructions;

— Façades made of precast concrete panels as part of the wall (see EN 14992).

NOTE 1 Precast concrete panels may be used in curtain walling kits as infill panels.

NOTE 2 Durability of structural sealed glazing infills is not covered by this 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 410, *Glass in building - Determination of luminous and solar characteristics of glazing*

EN 1096-2, *Glass in building - Coated glass - Part 2: Requirements and test methods for class A, B and S coatings*

EN 1096-3, *Glass in building - Coated glass - Part 3: Requirements and test methods for class C and D coatings*

EN 1096-4, *Glass in building - Coated glass - Part 4: Evaluation of conformity/Product standard*

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

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

EN 1279-3, *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, *Glass in building - Insulating glass units - Part 4: Methods of test for the physical attributes of edge seals*

EN 1279-5, *Glass in building - Insulating glass units - Part 5: Evaluation of conformity*

EN 1364-3, *Fire resistance tests for non-loadbearing elements - Part 3: Curtain walling - Full configuration (complete assembly)*

EN 1364-4, *Fire resistance tests for non-loadbearing elements - Part 4: Curtain walling - Part configuration*

EN 1991-1-1, *Eurocode 1: Actions on structures - Part 1-1: General actions - Densities, self-weight, imposed loads for buildings*

EN 1991-1-3, *Eurocode 1 - Actions on structures - Part 1-3: General actions - Snow loads*

EN 1991-1-4, *Eurocode 1: Actions on structures - Part 1-4: General actions - Wind actions*

EN 1998-1:2004, *Eurocode 8: Design of structures for earthquake resistance - Part 1: General rules, seismic actions and rules for buildings*

EN 12152, *Curtain walling - Air permeability - Performance requirements and classification*

EN 12153, *Curtain walling - Air permeability - Test method*

EN 12154, *Curtain walling - Watertightness - Performance requirements and classification*

EN 12155, *Curtain walling - Watertightness - Laboratory test under static pressure*

EN 12179, *Curtain walling - Resistance to wind load - Test method*

EN 12354-1, *Building Acoustics - Estimation of acoustic performance of buildings from the performance of elements - Part 1: Airborne sound insulation between rooms*

EN 12365-1, *Building hardware - Gasket and weatherstripping for doors, windows, shutters and curtain walling - Part 1: Performance requirements and classification*

EN 12365-4, *Building hardware - Gasket and weatherstripping for doors, windows, shutters and curtain walling - Part 4: Recovery after accelerated ageing test method*

EN 12412-2, *Thermal performance of windows, doors and shutters - Determination of thermal transmittance by hot box method - Part 2: Frames*

EN 12600:2002, *Glass in building - Pendulum test - Impact test method and classification for flat glass*

EN 12758, *Glass in building - Glazing and airborne sound insulation - Product descriptions and determination of properties*

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 13050, *Curtain Walling - Watertightness - Laboratory test under dynamic condition of air pressure and water spray*

EN 13116, *Curtain walling - Resistance to wind load - Performance requirements*

EN 13119, *Curtain walling - Terminology*

EN 13162, *Thermal insulation products for buildings - Factory made mineral wool (MW) products - Specification*

EN 13163, *Thermal insulation products for buildings - Factory made expanded polystyrene (EPS) products - Specification*

EN 13164, *Thermal insulation products for buildings - Factory made extruded polystyrene foam (XPS) products - Specification*

EN 13165, *Thermal insulation products for buildings - Factory made rigid polyurethane foam (PU) products - Specification*

EN 13166, *Thermal insulation products for buildings - Factory made phenolic foam (PF) products - Specification*

EN 13167, *Thermal insulation products for buildings - Factory made cellular glass (CG) products - Specification*

EN 13168, *Thermal insulation products for buildings - Factory made wood wool (WW) products - Specification*

EN 13169, *Thermal insulation products for buildings - Factory made expanded perlite board (EPB) products - Specification*

EN 13170, *Thermal insulation products for buildings - Factory made products of expanded cork (ICB) - Specification*

EN 13171, *Thermal insulation products for buildings - Factory made wood fibre (WF) products - Specification*

EN 13238, *Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates*

EN 13363-1, *Solar protection devices combined with glazing - Calculation of solar and light transmittance - Part 1: Simplified method*

EN 13363-2, *Solar protection devices combined with glazing - Calculation of total solar energy transmittance and light transmittance - Part 2: Detailed calculation method*

EN 13501-1, *Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests*

EN 13501-2, *Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services*

EN 13823, *Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item*

EN 14019, *Curtain Walling - Impact resistance - Performance requirements*

EN 14509, *Self-supporting double skin metal faced insulating panels - Factory made products - Specifications*

EN 15434, *Glass in building - Product standard for structural and/or ultra-violet resistant sealant (for use with structural sealant glazing and/or insulating glass units with exposed seals)*

EN 15651-1, *Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 1: Sealants for facade elements*

EN 15651-2, *Sealants for non-structural use in joints in buildings and pedestrian walkways - Part 2: Sealants for glazing*

EN ISO 717-1, *Acoustics - Rating of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation (ISO 717-1)*

EN ISO 1182, *Reaction to fire tests for products - Non-combustibility test (ISO 1182)*

EN ISO 1716, *Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value) (ISO 1716)*

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

EN ISO 8340, *Building construction - Sealants - Determination of tensile properties at maintained extension (ISO 8340)*

EN ISO 9046, *Building construction - Jointing products - Determination of adhesion/cohesion properties of sealants at constant temperature (ISO 9046)*

EN ISO 9047, *Building construction - Jointing products - Determination of adhesion/cohesion properties of sealants at variable temperatures (ISO 9047)*

EN ISO 10140-1, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 1: Application rules for specific products (ISO 10140-1)*

EN ISO 10140-2, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 2: Measurement of airborne sound insulation (ISO 10140-2)*

EN ISO 10140-3, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 3: Measurement of impact sound insulation (ISO 10140-3)*

EN ISO 10140-4, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 4: Measurement procedures and requirements (ISO 10140-4)*

EN ISO 10140-5, *Acoustics - Laboratory measurement of sound insulation of building elements - Part 5: Requirements for test facilities and equipment (ISO 10140-5)*

EN ISO 10590, *Building construction - Sealants - Determination of tensile properties of sealants at maintained extension after immersion in water (ISO 10590)*

EN ISO 10591, *Building construction - Sealants - Determination of adhesion/cohesion properties of sealants after immersion in water (ISO 10591)*

EN ISO 10848-1, *Acoustics - Laboratory measurement of the flanking transmission of airborne and impact sound between adjoining rooms - Part 1: Frame document (ISO 10848-1)*

EN ISO 10848-2, *Acoustics - Laboratory measurement of the flanking transmission of airborne and impact sound between adjoining rooms - Part 2: Application to light elements when the junction has a small influence (ISO 10848-2)*

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

EN ISO 11925-2:2010, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2:2010)*

EN ISO 12567-1, *Thermal performance of windows and doors - Determination of thermal transmittance by the hot-box method - Part 1: Complete windows and doors (ISO 12567-1)*

EN ISO 12631, *Thermal performance of curtain walling - Calculation of thermal transmittance (ISO 12631)*

3 Terms, definitions and abbreviated terms

3.1 Definitions

For the purposes of this document, the terms and definitions given in EN 1279-1, EN 13022-1, EN 13022-2, EN 13119, EN 15434 and the following apply.

3.1.1
curtain walling
part of the building envelope made of a framework usually consisting of horizontal and vertical profiles, connected together and anchored to the supporting structure of the building, and containing fixed and/or openable infills, which provides all the required functions of an internal or external wall or part thereof, but does not contribute to the load bearing or the stability of the structure of the building. Curtain walling is designed as a self-supporting construction which transmits dead-loads, imposed loads, environmental load (wind, snow, etc) and seismic load to the main building structure

3.1.2
curtain walling kit
defined set of components and/or assemblies that when installed on a building, form curtain walling

3.1.3
double skin curtain walling
type of curtain walling kit comprising inner and outer skins and an air cavity, the whole designed as an integrated system fulfilling the functions of the curtain walling kit

3.1.4
curtain walling system
defined set of components from which a curtain walling kit may be created for subsequent installation on a building. It can give rise to one or more different kits

3.1.5
curtain walling kit of similar design
curtain walling kit in which the replacement of components (e.g. glazing, hardware, gaskets and sealants), and/or a change of material specification and/or dimensional change of profile section and/or methods and means of assembly which will not adversely affect the classification and/or declared value of a performance characteristic

Note 1 to entry: Certain modifications might cause more favourable values for one or more characteristics, but also more unfavourable values for other characteristics (see Annex H).

3.1.6
patent glazing kits
patent glazing is a system of ventilated glazing in which the glass, often supported on only two edges with open joints, is dry glazed and does not provide an air seal

3.1.7
sloping parts of curtain walling kit
parts of curtain walling kit tilted more than 15° from the vertical