

**Katuse valmistarvikud. Individuaalsed
plastmassist katusevalgustid. Toote
spetsifikatsioonid ja katsemeetodid**

Prefabricated accessories for roofing - Individual roof
lights of plastics - Product specification and test
methods

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1873:2006 sisaldab Euroopa standardi EN 1873:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.02.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1873:2006 consists of the English text of the European standard EN 1873:2005.</p> <p>This document is endorsed on 27.02.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies requirements for roof lights made of plastic materials (e.g. GF-UP, PC, PMMA, PVC) with and without upstands made of e.g. GF-UP, PVC, steel, aluminium or wood for installation in roofs.</p>	<p>Scope: This European Standard specifies requirements for roof lights made of plastic materials (e.g. GF-UP, PC, PMMA, PVC) with and without upstands made of e.g. GF-UP, PVC, steel, aluminium or wood for installation in roofs.</p>
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English Version

Prefabricated accessories for roofing - Individual roof lights of plastics - Product specification and test methods

Accessoires préfabriqués pour couverture - Lanterneaux ponctuels en matière plastique - Spécifications des produits et méthodes d'essais

Vorgefertigte Zubehörteile für Dacheindeckungen - Lichtkuppeln aus Kunststoff - Produktfestlegungen und Prüfverfahren

This European Standard was approved by CEN on 4 September 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Contents

Page

Foreword	4
1 Scope	5
2 Normative references	8
3 Terms and definitions	9
4 Symbols and abbreviations	10
5 Requirements	11
5.1 Degree of total luminous transmittance (τ_{D65})	11
5.2 Durability	11
5.2.1 General	11
5.2.2 Variation of total luminous transmittance τ_{D65} and yellowness index $YI (\Delta YI)$	11
5.2.3 Variation of mechanical properties with ageing	12
5.3 Water tightness	13
5.3.1 Roof lights with upstand	13
5.3.2 Roof lights without upstand	13
5.4 Mechanical performances	13
5.4.1 Resistance to upward loads	13
5.4.2 Resistance to downward loads	14
5.4.3 Impact load	14
5.5 Reaction to fire	15
5.6 Resistance to fire	15
5.7 External fire performance	15
5.8 Air permeability	16
5.8.1 Roof lights with upstand	16
5.8.2 Roof lights without upstand	16
5.9 Thermal resistance	16
5.9.1 Roof lights with upstands	16
5.9.2 Roof light components	16
5.10 Airborne sound insulation	17
6 Testing	17
6.1 Light transmission	17
6.2 Durability	17
6.2.1 Conditions for accelerated ageing	17
6.2.2 Variation of light transmittance	18
6.2.3 Variation in yellowness index	18
6.2.4 Variation of mechanical properties with ageing	19
6.3 Watertightness	19
6.3.1 Principle	19
6.3.2 Procedure	19
6.3.3 Apparatus	19
6.4 Mechanical performances	21
6.4.1 Resistance to upward and downward loads	21
6.4.2 Impact load	21
6.5 Number and dimensions of test specimens	23
6.6 Test report	23
7 Evaluation of conformity	24
7.1 General	24
7.2 Initial type testing	24
7.3 Factory production control (FPC)	24
7.3.1 General	24
7.3.2 Equipment	24

7.3.3	Raw materials and components	25
7.3.4	Design process	25
7.3.5	Product testing and evaluation.....	25
8	Designation	26
9	Marking.....	26
Annex A	(informative) Guidelines for safety, application, use and maintenance.....	27
A.1	General	27
A.2	Guidelines for safety.....	27
A.3	Guidelines for application and use.....	27
A.4	Maintenance	28
Annex B	(normative) Alternative test method for the determination of light transmission	29
B.1	General	29
B.2	Apparatus	29
B.3	Test pieces	29
B.4	Procedure	30
B.5	Expression of results.....	30
Annex C	(informative) Information regarding luminous transmittance.....	31
C.1	General	31
C.2	Material characteristics	31
C.3	Transmission.....	32
C.4	Reflectance factor.....	32
C.5	Absorptance	32
C.6	Solar gain	33
C.6.1	General information	33
C.6.2	Illuminance	33
C.6.3	Solar factor	33
Annex ZA	(informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive	35
ZA.1	Scope and relevant characteristics	35
ZA.2	Procedure(s) for attestation of conformity of roof lights.....	37
ZA.2.1	Systems of attestation of conformity	37
ZA.2.2	EC Certificate and Declaration of conformity	41
ZA.3	CE marking and labelling	43
	Bibliography.....	47

Foreword

This European Standard (EN 1873:2005) has been prepared by Technical Committee CEN/TC 128 "Roof covering products for discontinuous laying and products for wall cladding", the secretariat of which is held by IBN/BIN.

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 June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

This European Standard 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(s), see informative Annex ZA, which is an integral part of this European Standard.

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

1 Scope

This European Standard specifies requirements for roof lights made of plastic materials (e.g. GF-UP, PC, PMMA, PVC) with and without upstands made of e.g. GF-UP, PVC, steel, aluminium or wood for installation in roofs. These roof lights serve the purpose of lighting by means of daylight and of ventilating interior spaces by means of opening devices.

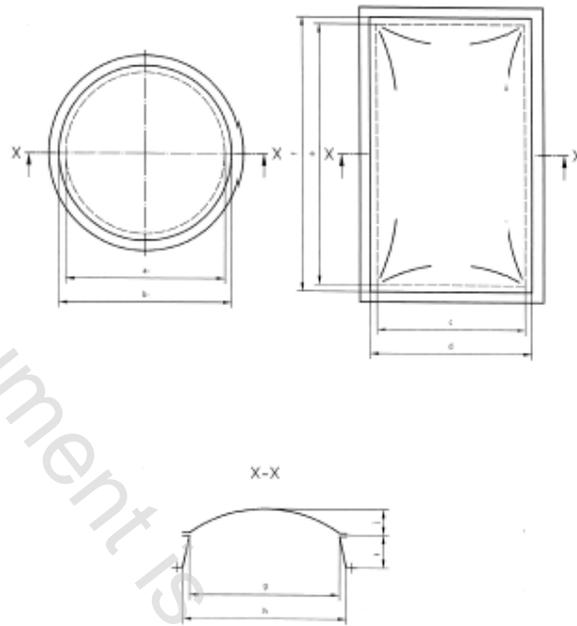
This European Standard applies to roof lights with a rectangular or circular ground plan (see Figures 1 and 2), with an opening span (width) or diameter not larger than 2,5 m and an opening length not larger than 3,0 m in roof pitches up to 25°. This document does not cover roof lights which contribute to the load-bearing or stiffness of the roof itself.

This European Standard applies to roof lights without upstand and to roof lights, where a single manufacturer provides all components of the roof light with upstand, which are bought in a single purchase.

The possible additional functions of smoke and heat ventilation in case of fire, and/or roof access, are outside the scope of this European Standard.

This European Standard does not include calculation with regard to construction, design requirements and installation techniques.

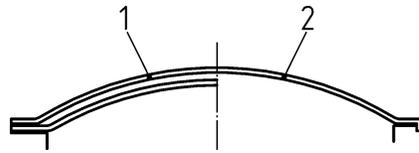
NOTE Guidelines for safety, application, use and maintenance of individual roof lights are presented in Annex A.



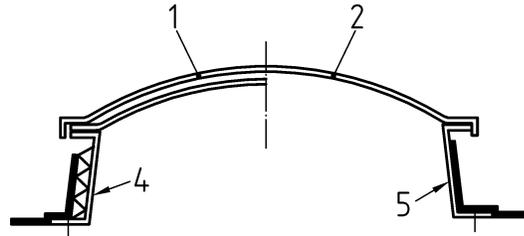
Key

- | | |
|-------------------------|-----------------------|
| a daylight diameter | f roof opening length |
| b roof opening diameter | g daylight size |
| c daylight width | h roof opening size |
| d roof opening width | i upstand height |
| e daylight length | j roof light height |

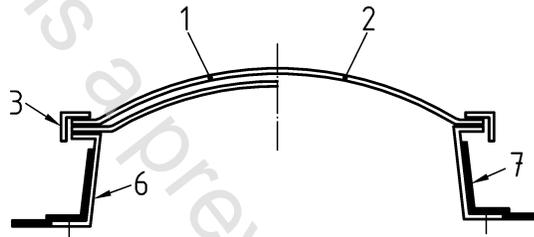
Figure 1 — Typical individual roof lights



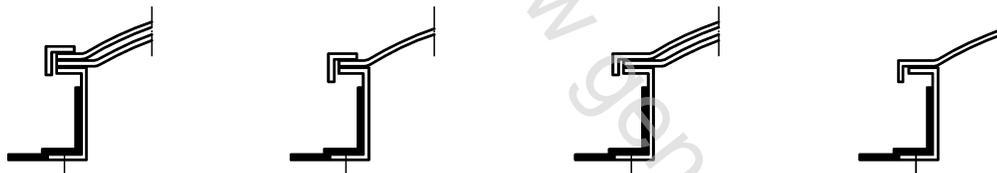
2a) Individual roof light without upstand



2b) Individual roof light with upstand



2c) Individual roof light with upstand and edge profile



with edge profile

without edge profile

2d) Vertical upstands

Key

- | | | | | | |
|---|--------------|---|-----------------------|---|-------------|
| 1 | multi skin | 4 | insulated upstand | 7 | roof finish |
| 2 | single skin | 5 | non insulated upstand | | |
| 3 | edge profile | 6 | splayed upstand | | |

Figure 2 — Cross sections of typical individual roof lights and upstands

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 596, *Timber structures – Test methods – Soft body impact test of timber framed walls*

EN 673, *Glass in building – Determination of thermal transmittance (U value) – Calculation method*

EN 674, *Glass in building – Determination of thermal transmittance (U value) – Guarded hot plate method*

EN 675, *Glass in building – Determination of thermal transmittance (U value) – Heat flow meter method*

EN 1013-3, *Light transmitting profiled plastic sheeting for single skin roofing – Part 3: Specific requirements and test methods for sheets of polyvinyl chloride (PVC)*

EN 1013-5, *Light transmitting profiled plastic sheeting for single skin roofing – Part 5: Specific requirements, test methods and performance of polymethylmethacrylate (PMMA) sheets*

ENV 1187:2002, *Test methods for external fire exposure to roofs*

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

EN 13501-1, *Fire classification of construction products and building elements – Part 1: Classification using test 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*

prEN 13501-5, *Fire classification of construction products and building elements – Part 5: Classification using data from external fire exposure to roof tests*

EN ISO 140-3, *Acoustics – Measurement of sound insulation in buildings and of building elements – Part 3: Laboratory measurement of airborne sound insulation of building elements (ISO 140-3:1995)*

EN ISO 178, *Plastics – Determination of flexural properties (ISO 178:2001)*

EN ISO 527-1, *Plastics – Determination of tensile properties – Part 1: General principles (ISO 527-1:1993 including Corr 1:1994)*

EN ISO 527-2, *Plastics – Determination of tensile properties – Part 2: Test conditions for moulding and extrusion plastics (ISO 527-2:1993 including Corr 1:1994)*

EN ISO 4892-1, *Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance (ISO 4892-1:1999)*

EN ISO 4892-2, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc sources (ISO 4892-2:1994)*

EN ISO 6946, *Building components and building elements – Thermal resistance and thermal transmittance – Calculation method (ISO 6946:1996)*

EN ISO 10077-2, *Thermal performance of windows, doors and shutters – Calculation of thermal transmittance – Part 2: Numerical method for frames (ISO 10077-2:2003)*

EN ISO 10211-1, *Thermal bridges in building construction – Heat flows and surface temperatures – Part 1: General calculation methods (ISO 10211-1:1995)*

EN ISO 10211-2, *Thermal bridges in building construction – Calculation of heat flows and surface temperatures – Part 2: Linear thermal bridges (ISO 10211-2:2001)*

EN ISO 10456, *Building materials and products – Procedures for determining declared and design thermal values (ISO 10456:1999)*

EN ISO 12017:1996, *Plastics – Poly(methyl methacrylate) double- and triple-skin sheets – Test methods (ISO 12017:1995)*

prEN ISO 12567-2, *Thermal performance of windows and doors – Determination of thermal transmittance by hot box method – Part 2: Roof windows and other projecting windows (ISO/DIS 12576-2:2005)*

EN ISO 13468-1, *Plastics – Determination of the total luminous transmittance of transparent materials – Part 1: Single-beam instrument (ISO 13468-1:1996)*

EN ISO 14125, *Fibre-reinforced plastic composites – Determination of flexural properties (ISO 14125:1998)*

ISO 10526, *CIE standard illuminants for colorimetry*

ISO/IEC 10527:1991, *CIE standard colorimetric observers*

ISO 13468-2, *Plastics – Determination of the total luminous transmittance of transparent materials – Part 2: Double-beam instrument*

3 Terms and definitions

For the purposes of this European Standard, the following definitions apply.

3.1

plastic roof light

building element which consists of one or several light transmitting (translucent or transparent) skins. The translucent part of the roof light is one single element (see Figure 3)

3.2

upstand

element which is single- or multi-walled or composite with vertical and/or pitched walls; with or without thermal insulation and having the two-fold purpose of providing an area for the fixture of plastic roof lights and for connection to the substructure, the roof covering or the roof sealing. The upstand transmits into the substructure the loads acting upon the plastic roof lights. Upstands may include ventilation devices

3.3

accessories

connections, opening and locking devices and seals for the assembly of the elements according to 3.1 and 3.2

3.4

plastic rooflight with upstand

building element which consists of at least the separate elements in accordance with 3.1, 3.2 and 3.3

3.5

batch

quantity of material made in a single operation, or in the case of continuous production for a defined quantity which shall be demonstrated by the producer to have a uniform composition