

# SLOVENSKI STANDARD oSIST prEN 17074:2017

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# Steklo v stavbah - Okoljske deklaracije za proizvode - Pravila za kategorije proizvodov iz ravnega stekla

Glass in building - Environmental product declaration - Product category rules for flat glass products

Glas im Bauwesen - Umweltproduktdeklaration - Produktkategorieregeln für Flachglaserzeugnisse

Verre dans la construction - Déclaration environnementale des produits - Règles régissant les catégories de produits en verre plat

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**English Version** 

# Glass in building - Environmental product declaration -Product category rules for flat glass products

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

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# oSIST prEN 17074:2017

# prEN 17074:2017 (E)

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# **European foreword**

This document (prEN 17074:2017) has been prepared by Technical Committee CEN/TC 129 "Glass in building", the secretariat of which is held by NBN.

This document is currently submitted to the CEN Enquiry.

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

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# Introduction

This document provides Product Specific Category Rules for flat glass products (Flat Glass PCR) used in buildings and other construction works to support the assessment of the environmental performance and the development of Environment Product Declarations.

This Flat Glass PCR aims at complementing the general rules established in EN 15804, by providing additional detailed rules on technical and environmental aspects of the manufacture of flat glass products, as well as information on relevant aspects linked to use and end-of-life stages, on a harmonized and scientific basis.

It specifies the requirements for the Life Cycle Assessment (LCA) study and the format and content of the EPD itself.

In the Environment Product Declarations, the information is presented by way of a modular approach, which allow easy organization and expression of data packages throughout the life cycle stages of the product. The approach requires that the underlying data should be consistent, reproducible and comparable.

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# 1 Scope

This European Standard covers all life cycle stages, from cradle to grave, namely product stage, construction process stage, use stage and end-of-life stage of glass products (see point 4), used in buildings.

While covering all life cycle stages, this PCR primarily focuses on the product stage, in particular the manufacturing of flat glass and the consequent processing into flat glass products (as listed in point 4.), from cradle to gate. It covers raw materials and energy supply, transport, flat glass manufacturing, flat glass processing, packaging and storage.

All requirements and recommendations in this PCR for the elaboration of the Life Cycle Inventory may be applicable to flat glass used in other applications, such as flat glass used in automotive.

This PCR includes the rules to produce EPD that contains more than one thickness or configuration of the same product.

This European Standard does not apply to glass blocks, glass paver units (EN 1051-1) and channel-shaped glass (EN 572-7, EN 15683-1).

## 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 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 572-7, Glass in building - Basic soda lime silicate glass products - Part 7: Wired or unwired channel shaped glass

EN 1036-1, Glass in building - Mirrors from silver-coated float glass for internal use - Part 1: Definitions, requirements and test methods

EN 1096-1, Glass in building - Coated glass - Part 1: Definitions and classification

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

EN 1748-1-1, Glass in building - Special basic products -Borosilicate glasses - Part 1-1: Definition and general physical and mechanical properties

EN 1748-2-1, Glass in building - Special basic products - Glass ceramics - Part 2-1 Definitions and general physical and mechanical properties

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EN 1863-1, Glass in building - Heat strengthened soda lime silicate glass - Part 1: Definition and description

EN 12150-1, Glass in building - Thermally toughened soda lime silicate safety glass - Part 1: Definition and description

EN 12337-1, Glass in building - Chemically strengthened soda lime silicate glass - Part 1: Definition and description

EN 13024-1, Glass in building - Thermally toughened borosilicate safety glass - Part 1: Definition and description

EN 14178-1, Glass in building - Basic alkaline earth silicate glass products - Part 1: Float glass

EN 14179-1, Glass in building - Heat soaked thermally toughened soda lime silicate safety glass - Part 1: Definition and description

EN 14321-1, Glass in building - Thermally toughened alkaline earth silicate safety glass - Part 1: Definition and description

EN 15681-1, Glass in building - Basic alumino silicate glass products - Part 1: Definitions and general physical and mechanical properties

EN 15682-1, Glass in building - Heat soaked thermally toughened alkaline earth silicate safety glass - Part 1: Definition and description

EN 15683-1, Glass in building - Thermally toughened soda lime silicate channel shaped safety glass - Part 1: Definition and description

EN 15755-1, Glass in building - Adhesive backed polymeric filmed glass - Part 1: Definitions and requirements

EN 15804:2012+A1:2013, Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products

EN 16477-1, Glass in building - Painted glass for internal use - Part 1: Requirements

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 ISO 12543-2, Glass in building - Laminated glass and laminated safety glass - Part 2: Laminated safety glass (ISO 12543-2)

EN ISO 12543-3, Glass in building - Laminated glass and laminated safety glass - Part 3: Laminated glass (ISO 12543-3)

EN ISO 14025, Environmental labels and declarations - Type III environmental declarations - Principles and procedures (ISO 14025)

ISO 21930, Sustainability in buildings and civil engineering works - Environmental declaration of building products

# 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15804 and the following apply.

# 3.1

# by-product

substance or object resulting from a production process and meeting the following conditions:

(a) further use is certain;

(b) it can be used directly without any further processing other than normal industrial practice;

(c) it is produced as an integral part of a production process; and

(d) further use is lawful

(SOURCE: DIRECTIVE 2008/98/EC, Article 5)

## 3.2

### end-of-waste status

certain specified waste shall cease to be waste when it has undergone a recovery, including recycling, operation and complies with specific criteria developed in accordance with the following conditions:

(a) it is commonly used for specific purposes;

(b) a market or demand exists;

(c) it fulfils the technical requirements for the specific purposes and meets the existing legislation and standards applicable to products; and the specific purposes and meets the existing legislation and standards applicable to products; and the specific purposes and meets the existing legislation and standards applicable to products; and the specific purposes and meets the existing legislation and standards applicable to product appl

(d) the use will not lead to overall adverse environmental or human health impacts

(SOURCE: DIRECTIVE 2008/98/EC, Article 6)

Note 1 to entry: Criteria for determining when glass cullet destined for the production of glass substances or objects in re-melting processes ceases to be waste are established by the Commission Regulation No 1179/2012.

## 3.3

#### internal cullet

composed of defective products detected and rejected by a quality control process during the industrial process of glass manufacturing, transition phases of product changes (such as thickness and/or colour changes) and production offcuts

Note 1 to entry: These materials are immediately absorbed by the respective industrial process as a raw material for a new melting operation, not leaving the glass manufacturing plant. Internal cullet cannot be considered as waste as it was never a product.

(SOURCE: JRC-IPTS Working document – EoW criteria for waste glass)

## 3.4

## external cullet

waste glass that is collected and/or reprocessed with the purpose of recycling

Note 1 to entry: External cullet can be of two types, pre-consumer, also called post-industrial glass cullet, and post-consumer glass cullet. (SOURCE: JRC-IPTS Working document – EoW criteria for waste glass)

### 3.5

#### pre-consumer cullet

waste glass resulting from the manufacturing of products that contain glass as one of their components, and which leaves the specific facility where it was generated but not reaching the consumer market

Note 1 to entry: An example of pre-consumer cullet is the glass cullet constituted by off cuts of the production of windows which leave the processing facility and are re-melted in the flat glass manufacturing facility.

Note 2 to entry: Pre-consumer cullet if sorted properly fulfils the cullet specifications of the flat glass manufacturers and can be directly sent back to the furnace without additional treatment.

(SOURCE: JRC-IPTS Working document – EoW criteria for waste glass)

#### 3.6

#### post-consumer cullet

waste glass originated after the use of the glass products at the consumer market

(SOURCE: JRC-IPTS Working document – EoW criteria for waste glass)

#### 3.7

similar product

product covered by this PCR produced by the same company using the same production process

# 4 Products covered/ Products category

### 4.1 General

Glass is used in a variety of construction applications to provide a transparent, impermeable barrier, which may have additional insulating, solar control, security, noise reduction or decorative properties. Glass is also used as a base component for other technologies such as photovoltaic cells, which may be incorporated in construction works.

These Product Category Rules (PCR) are applicable to the production of flat glass for use in buildings such as:

- a) basic glass products according to EN 572-1:
  - float glass according to EN 572-2;
  - polished wired glass according to EN 572-3;
  - drawn sheet glass according to EN 572-4;
  - patterned glass according to EN 572-5;
  - wired patterned glass according to EN 572-6;
  - wired or unwired channel-shaped according to EN 572-7;
- b) special basic glass products:
  - borosilicate glass according to EN 1748-1-1;
  - glass ceramics according to EN 1748-2-1;
  - alkaline earth silicate glass according to EN 14178-1;

- alumina silicate according to EN 15681-1;
- c) processed glasses:
  - heat strengthened soda lime silicate glass according to EN 1863-1;
  - thermally toughened soda lime silicate safety glass according to EN 12150-1;
  - heat soaked thermally toughened soda lime silicate safety glass according to EN 14179-1;
  - chemically strengthened soda lime silicate glass according to EN 12337-1;
  - thermally toughened borosilicate safety glass according to EN 13024-1;
  - thermally toughened alkaline earth silicate safety glass according to EN 14321-1;
  - heat soaked thermally toughened alkaline earth silicate safety glass according to EN 15682-1;
  - thermally toughened soda lime silicate channel shaped safety glass according to EN 15683-1, laminated glass and laminated safety glass according to EN ISO 12543-1, EN ISO 12543-2 and EN ISO 12543-3;
  - insulating glass unit according to EN 1279-1;
  - coated glass according to EN 1096-1;
  - mirror form silvered coated glass for interior use according to EN 1036-1;
  - painted glass according to EN 16477-1; 7074-2020
  - adhesive back polymeric filmed glass according to EN 15755-1;
  - surface worked glass (e.g. sand blasted, acid etched);
  - any combination of the above.

NOTE The above list of products is not exhaustive. The PCR can also apply to other glass products not listed above.

#### 4.2 Inclusion of several products in the same EPD

Similar products can be presented in the same EPD but using different tables. A set of indicators and technical information per product shall be included.

## 5 Comparability of EPDs

Comparison of EPDs of products used in buildings should consider the complete life cycle (cradle to grave EPDs) as it should be based on the product's use and its impacts on the building (EN 15804).

For comparison of EPDs of glass products used in buildings (comparisons at sub-building level), the requirements of comparability set out in EN 15804 and EN ISO 14025 shall be met.

Comparison of EPDs is not a simple and direct process. It requires the assurance of comparable conditions and assumptions to avoid inaccurate conclusions. Functional requirements, as well as technical and environmental characteristics and conditions must be the same.