SLOVENSKI STANDARD
SIST EN 12608-1:2016

01-maj-2016

Nadomešča:
SIST EN 12608:2003

Profili iz trdega polivinilklorida (PVC-U) za izdelavo oken in vrat - Razvrščanje, zahteve in preskusne metode - 1. del: Neprevlečeni PVC-U profili s svetlo površino

Unplasticized poly(vinyl chloride) (PVC-U) profiles for the fabrication of windows and doors - Classification, requirements and test methods - Part 1: Non-coated PVC-U profiles with light coloured surfaces

Profile aus weichmacherfreiem Polyvinylchlorid (PVC-U) zur Herstellung von Fenstern und Türen - Klassifizierung, Anforderungen und Prüfverfahren - Teil 1: Nicht beschichtete PVC-U Profile mit hellen Oberflächen

Profilés de poly(chlorure de vinyle) non plastifié (PVC-U) pour la fabrication des fenêtres et des portes — Classification, exigences et méthodes d'essai - Partie 1: Profilés en PVC -U non revêtus avec des faces de teinte claire

Ta slovenski standard je istoveten z: **EN 12608-1:2016**

ICS:

83.140.99	Drugi izdelki iz gume in polimernih materialov	Other rubber and plastics products
91.060.50	Vrata in okna	Doors and windows

SIST EN 12608-1:2016 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

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

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Contents

Page

European foreword

This document (EN 12608-1:2016) has been prepared by Technical Committee CEN/TC 33 “Doors, windows, shutters, building hardware 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of an identical text or by endorsement, at the latest by September 2016, and conflicting national standards shall be withdrawn at the latest by March 2017.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 12608:2003.

The major modifications to the previous edition are:

— Change in structure of definitions (general, profile, geometrical and material);

— Review of definitions of own reprocessed (previously reprocessable) material (3.4.5) and external reprocessed (previously reprocessable) material (3.4.6);

— Including a new material (non-UV resistant virgin material);

— Review of Table 1, which defines the classification of climatic zones in Europe; (correction of a mistake in EN12608:2003);

— Addition of a class (no performance determined) for the classification of main profiles according to the resistance to impact by falling mass (Table 2);

— Complete review of 5.1, giving the requirements for materials, establishing the distinction between UV resistant virgin material (5.1.1), non UV-resistant virgin material (5.1.2) and reprocessed (previously reprocessable), recycled (previously recyclable) materials and non-UV resistant virgin materials (5.1.3) with the addition of Table 4 which defines the uses allowed according to the type of material);

— Review of the test of Charpy impact resistance of main profiles (5.8); Introduction of dependence on classes of wall thickness;

— Review of the methods to determine the colorimetric co-ordinates (6.5);

— Addition of new subclause 6.4 for the determination of the thickness of a co-extruded layer;

— Addition of a requirement for individual values for the Vicat softening temperature (A.4.1);

— Addition of a requirement for individual values for the flexural modulus of elasticity (A.4.2);

— Addition of a requirement for individual values for the tensile impact strength (A.4.3);

— Deletion of the Charpy impact resistance from Annex A (material characteristics);

— Editorial review of the whole document and updating of normative references.

EN 12608, *Unplasticized poly(vinyl chloride) (PVC-U) profiles for the fabrication of windows and doors - Classification, requirements and test methods* consists of the following parts:

— *Part 1: Non-coated PVC-U profiles with light coloured surfaces*

— *Parts 2: PVC-U profiles with laminated foils* (in preparation)

— *Parts 3: PVC-U profiles with coextruded coloured top-layer* (in preparation)

— *Parts 4: PVC-U profiles with lacquered-coating* (in preparation)

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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the classifications, requirements and test methods for non-coated unplasticized poly(vinyl chloride) (PVC-U) profiles with light coloured surfaces intended to be used for the fabrication of windows and doors.

It is applicable to PVC-U profiles with the colorimetric co-ordinates measured on the visible surfaces, as follows:

— $L^* \geq 82$ (chromaticity co-ordinate $Y \geq 60$),

— $-2{,}5 \leq a^* \leq 5$,

— $-5 \leq b^* \leq 15$.

NOTE 1 For editorial reasons in this document the term "window" is used for window/door.

NOTE 2 Profiles made from PVC-U materials with reinforcements (e.g. glass fibres) are not part of this scope.

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 477, *Unplasticized polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors - Determination of the resistance to impact of main profiles by falling mass*

EN 478, *Unplasticized polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors - Appearance after exposure at 150 °C - Test method*

EN 479, *Unplasticized polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors - Determination of heat reversion*

EN 513, *Unplasticized polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors - Determination of the resistance to artificial weathering*

EN 514, *Unplasticized polyvinylchloride (PVC-U) profiles for the fabrication of windows and doors - Determination of the strength of welded corners and T-joints*

EN ISO 105-A01:2010, *Textiles - Tests for colour fastness - Part A01: General principles of testing (ISO 105-A01:2010)*

EN ISO 178, *Plastics - Determination of flexural properties (ISO 178)*

EN ISO 179-1, *Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test (ISO 179-1)*

EN ISO 306, *Plastics - Thermoplastic materials - Determination of Vicat softening temperature (VST) (ISO 306)*

EN ISO 1163-2:1999, *Plastics - Unplasticized poly(vinyl chloride) (PVC-U) moulding and extrusion materials - Part 2: Preparation of test specimens and determination of properties (ISO 1163-2:1995)*

EN ISO 8256, *Plastics - Determination of tensile-impact strength (ISO 8256)*

EN ISO 11664-1, *Colorimetry - Part 1: CIE standard colorimetric observers (ISO 11664-1)*

EN ISO 11664-2, *Colorimetry - Part 2: CIE standard illuminants (ISO 11664-2)*

EN ISO 11664-4, *Colorimetry - Part 4: CIE 1976 L*a*b* Colour space (ISO 11664-4)*

EN 20105-A02, *Textiles - Tests for colour fastness - Part A02: Grey scale for assessing change in colour (ISO 105-A02)*

ISO 18314-1, *Analytical colorimetry — Part 1: Practical colour measurement*

3 Terms and definitions

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

3.1 General

3.1.1
durability
ability of a profile to maintain satisfactory properties in a window over an estimated working life which is at least the economically reasonable working life of the window installed in a building (works)

Note 1 to entry: The indications given on the working life of a product cannot be interpreted as a guarantee given by the producer, but are regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

3.2 Profile definitions

3.2.1
profile
product produced by extrusion

3.2.2
non-coated profile
profile without any surface treatment and without non-PVC-U coextruded layer(s)

EXAMPLE Profiles without laminated foils or painted surfaces.

3.2.3
main profile
profile, which defines the structure of the window

3.2.4
auxiliary profile
profile intended to be used for the fabrication of a window which is not a main profile

Note 1 to entry: Main and auxiliary profiles can be different according to the window construction techniques in the individual countries.

3.2.5
external wall (of a main profile)
wall of a main profile corresponding to its sight and non-sight surfaces

3.2.6
sight surface
surface of a profile exposed to view when the installed window is closed

Note 1 to entry: See Figure 1.

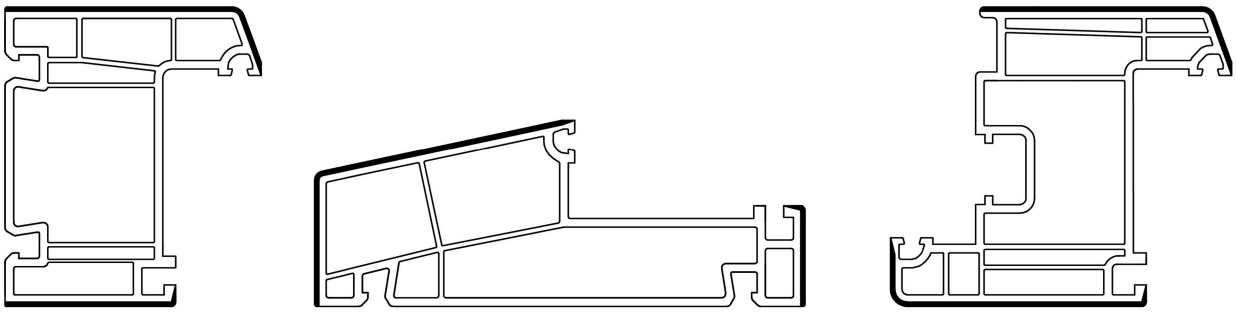


Figure 1 — Sight surfaces of three typical main profiles

3.2.7
visible surface
any surface or parts of surface of a profile which can be exposed to UV radiation after installation of the window, open or closed

3.2.8
coextruded profile
profile produced by using more than one extruder with different PVC-U materials according to 3.4 in one production process without mixing them

3.3 Geometrical definitions

3.3.1
nominal profile shape
shape and dimensions of a profile, as specified by the manufacturer

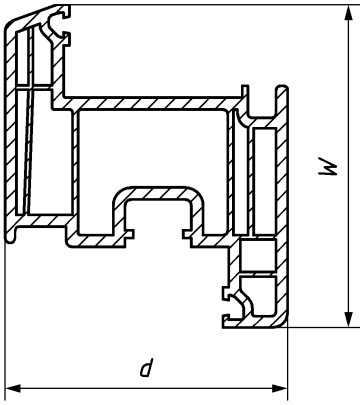
3.3.2
deviation from straightness
deviation of the longitudinal axis of a profile from the straight line

3.3.3
depth (of a profile)
d
dimension, measured at right angles to the glazing plane, between the front and back face surfaces of a profile

Note 1 to entry: See "*d*" in Figure 2.

3.3.4
overall width (of a profile)
w
largest dimension, measured in the direction of the glazing plane, perpendicular to the longitudinal axis of a profile

Note 1 to entry: See "*w*" in Figure 2.



Key
d depth of a profile
w overall width of a profile

Figure 2 — Cross-section of a typical profile

3.4 Material definitions

3.4.1
material
PVC-U compound in a form of granules or powder for the production of PVC-U profiles intended to be used for the fabrication of a window

3.4.2
defined formulation
formulation which is a specified composition of polymer, additives and pigments

3.4.3
virgin material
material of a defined formulation, which has not been used or processed other than required for its manufacture and to which no reprocessed or recycled material has been added

3.4.4
non-UV resistant virgin material
material according to 3.4.3 but not necessarily satisfying the requirements of the resistance to weathering

Note 1 to entry: See 5.9.