

Plastics - Poly(vinyl chloride) (PVC) based profiles -
Determination of the resistance to impact of profiles by
falling mass

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 477:2018 sisaldab Euroopa standardi EN 477:2018 ingliskeelset teksti.	This Estonian standard EVS-EN 477:2018 consists of the English text of the European standard EN 477:2018.
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ICS 83.080.20, 83.140.99

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EUROPEAN STANDARD

EN 477

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2018

ICS 83.080.20; 83.140.99

Supersedes EN 477:1995

English Version

Plastics - Poly(vinyl chloride) (PVC) based profiles -
Determination of the resistance to impact of profiles by
falling mass

Plastiques - Profilés à base de poly(chlorure de vinyle)
(PVC) - Détermination de la résistance aux chocs par
masse tombante des profilés

Kunststoffe - Profile auf Basis von Polyvinylchlorid
(PVC) - Bestimmung der Stoßfestigkeit von Profilen
mittels Fallbolzens

This European Standard was approved by CEN on 6 December 2017.

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 477:2018) has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

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

This document supersedes EN 477:1995.

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

1 Scope

This European Standard specifies a method for determining the resistance to impact by a falling mass at -10 °C of unplasticized poly(vinyl chloride) (PVC-U) profiles.

It is also applicable to PVC-based profiles at specified temperatures/test conditions.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

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

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

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

3.1

inner web

partition wall connecting two walls of a profile

4 Principle

Test specimens cut from lengths of profiles are subjected to a blow from a mass falling from a known height on the surface at a point mid-way between two inner webs at a fixed temperature.

After testing the profiles are examined visually for failures in the surface tested.

5 Apparatus

An impact testing machine incorporating the following basic components (see Figure 1) shall be used:

- a) **main frame**, rigidly fixed in the vertical position;
- b) **guide rails**, fixed to the main frame to accommodate the falling mass and allowing it to fall freely in the vertical plane;
- c) **test specimen support**, consisting of two rounded off supports (see Figure 2) (200 ± 1) mm apart. The support shall be made from steel and rigidly fixed in a solid foundation or on a table with a mass of more than 50 kg;
- d) **release mechanism**, such that the falling height of the mass, measured from the top surface of the test specimen to be tested, can be adjusted up to the falling height defined in the referred product standard with a tolerance of $(\begin{smallmatrix} +10 \\ 0 \end{smallmatrix})$ mm (e.g. 1 000 mm, 1 500 mm);
- e) **falling mass**, of $(1\ 000 \pm 5)$ g, which has a hemispherical striking surface of $(25 \pm 0,5)$ mm radius.

The striking surface shall be free from all imperfections.