SLOVENSKI STANDARD
SIST EN 477:2018

01-april-2018

Nadomešča:
SIST EN 477:2000

Polimerni materiali - Profili na osnovi polivinilklorida (PVC) - Ugotavljanje odpornosti profilov proti učinku padajoče mase

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

Profile aus weichmacherfreiem Polyvinylchlorid (PVC-U) - Bestimmung der Stoßfestigkeit von Profilen mittels Fallbolzen

Profilés de poly(chlorure de vinyle) non plastifié (PVC-U) - Détermination de la résistance aux chocs par masse tombante des profilés

Ta slovenski standard je istoveten z: **EN 477:2018**

ICS:

83.140.99	Drugi izdelki iz gume in polimernih materialov	Other rubber and plastics products

SIST EN 477:2018 **en,fr,de**

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 477

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

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Ref. No. EN 477:2018 E

Contents

Page

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of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.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

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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;

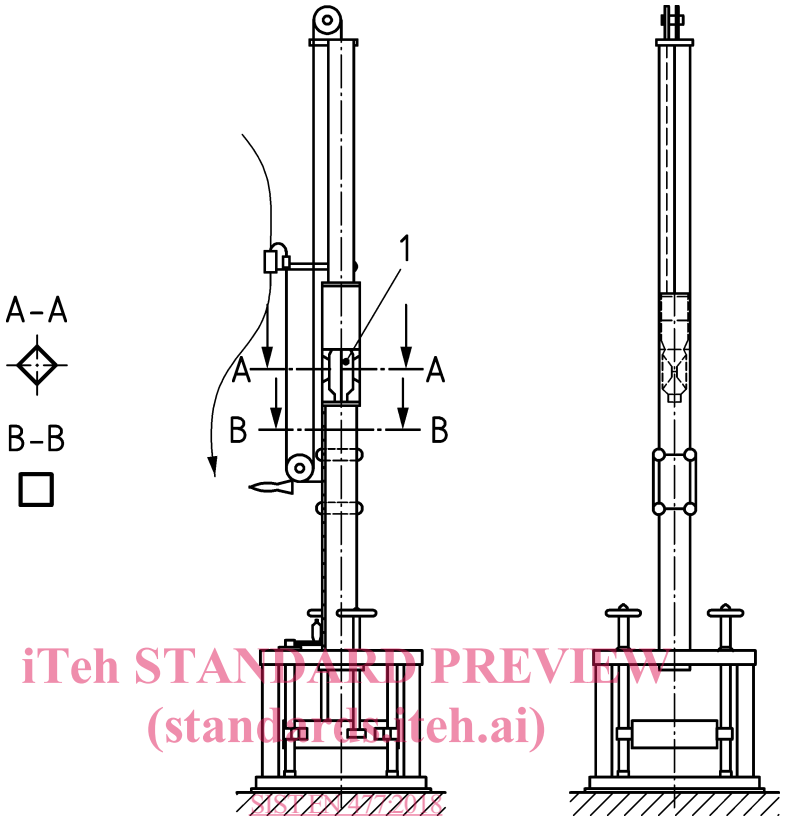
d) **release mechanism**, such that the falling height of the mass, measured from the top surface of the test specimen to be tested, can be adjusted up to the falling height defined in the referred product standard with a tolerance of $(^{+10}_{0})$ mm (e.g. 1 000 mm, 1 500 mm);

e) **falling mass**, of (1 000 ± 5) g, which has a hemispherical striking surface of (25 ± 0,5) mm radius.

The striking surface shall be free from all imperfections.

6 Test specimens

Ten test specimens, each of length of 300 mm shall be taken from a profile.



Key

1 falling mass

Figure 1 — Example of impact resistance testing apparatus

Dimensions in millimetres

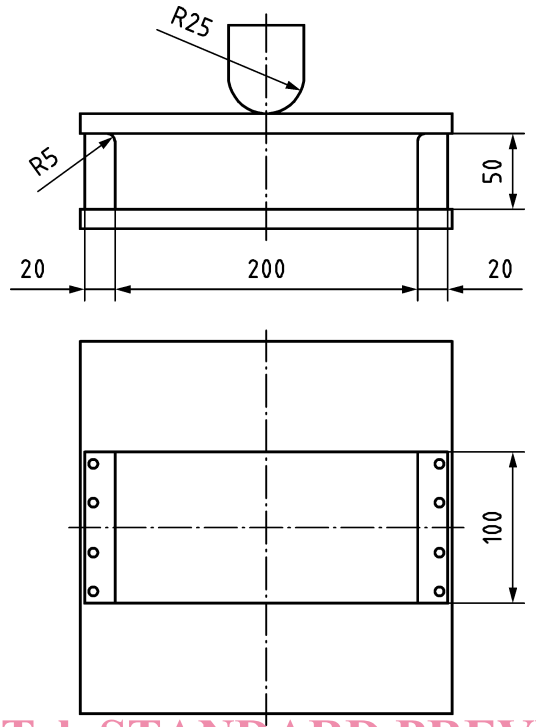


Figure 2 — Example of a supporting device

7 Conditioning

The test specimens shall be conditioned at a temperature of (-10^{0}_{3}) °C for at least 1 h before testing.

Each test specimen shall be tested within 10 s of removal from the conditioning chamber.

8 Procedure

8.1 The test shall be performed on the surface of the profile, as defined by the referred standard.

8.2 Drop the falling mass from the given height as required in the product standard at a point mid-way between two inner webs.

Where it is impracticable for the mass to hit the profile in accordance to the above due to its geometry other impact positions for the falling mass should be agreed upon between the profile manufacturer and the testing laboratory.

When due to its geometry, the profile tend to tilt sideways at the impact of the falling mass, any tilting should be prevented, by attaching additional stays to the two supports.

During the test care should be taken to prevent multiple impacts of the falling mass on the test specimen.

9 Expression of results

The number of test specimens tested and the number of test specimens broken shall be reported for each type of profile.