BS EN 477:2018

BSI Standards Publication

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

National foreword

This British Standard is the UK implementation of EN 477:2018. It supersedes BS EN 477:1999, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/21, Testing of plastics.

A list of organizations represented on this committee can be obtained on request to its secretary.

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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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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of an identical text or by endorsement, at the latest by July2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

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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 $\begin{pmatrix} +10 \\ 0 \end{pmatrix}$ 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.