



SLOVENSKI STANDARD

SIST EN 479:2018

01-april-2018

Nadomešča:
SIST EN 479:2000

Polimerni materiali - Profili na osnovi polivinilklorida (PVC) - Ugotavljanje preostale deformacije po toplotni obremenitvi

Plastics - Poly(vinyl chloride) (PVC) based profiles - Determination of heat reversion

Profile aus weichmacherfreiem Polyvinylchlorid (PVC-U) - Bestimmung des Wärmeschrumpfes

Profilés de poly(chlorure de vinyle) non plastifié (PVC-U) - Détermination du retrait à chaud

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Ta slovenski standard je istoveten z: EN 479:2018

ICS:

83.140.99	Drugi izdelki iz gume in polimernih materialov	Other rubber and plastics products
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en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 479

January 2018

ICS 83.080.20; 83.140.99

Supersedes EN 479:1995

English Version

**Plastics - Poly(vinyl chloride) (PVC) based profiles -
Determination of heat reversion**

Plastiques - Profilés à base de poly(chlorure de vinyle)
(PVC) - Détermination du retrait à chaud

Kunststoffe - Profile auf Basis von Polyvinylchlorid
(PVC) - Bestimmung des Wärmeschrumpfes

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

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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 United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 479:2018) 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 479:1995.

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.

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1 Scope

This European Standard specifies a method for determining the heat reversion of unplasticized poly(vinyl chloride) (PVC-U) profiles at 100 °C in air.

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

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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>

4 Principle

A test specimen of a specified length of profile is maintained in an oven at 100 °C for 1 h.

A marked length of this test specimen is measured under identical conditions, before and after heating in the oven.

The heat reversion is calculated as the percentage change of the final length relative to the initial length per pair of marks.

5 Apparatus

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5.1 Air oven, thermostatically controlled, with forced air circulation, in which the test specimens can be exposed to a temperature of 100 °C.

The oven shall be equipped with a thermostat capable of maintaining the temperature at (100 ± 3) °C and a support system which keeps the specimen in position and enables heat transfer.

NOTE The use of talc or PTFE foil can be convenient to avoid sticking.

5.2 Measuring device, to measure the length of the test specimen to an accuracy of 0,1 mm.

6 Test specimens

6.1 The test specimen shall be of a minimum length of 250 mm of profile.

6.2 Prepare three similar test specimens per length of profile.

7 Conditioning

Condition the test specimens for at least 1 h at room temperature.

In cases of dispute the test specimens shall be conditioned at (23 ± 2) °C.

8 Procedure

8.1 Using, a scribe or similar implement, trace on each test specimen two marks, perpendicular to the profile axis, 200 mm apart, so that one of them is approximately 25 mm from one end of the test specimen.

8.2 Measure for every test specimen at room temperature the distance between the two marks in one pair with an accuracy of 0,1 mm.

8.3 Set the oven temperature to 100 °C.

8.4 When the oven has reached 100 °C, place the test specimens horizontally in the oven on the support system.

8.5 Maintain the test specimens in the oven for $(60 \frac{+3}{0})$ min, after the temperature has regained to 100 °C.

8.6 Remove the support system with the test specimens from the oven and let them cool down in air to room temperature on the support system.

Under identical conditions to those used in 8.2, measure the distance between the two marks per pair.

8.7 In cases of dispute the cooling of the profiles and the measuring of the distance between the marks shall be performed at (23 ± 2) °C.

9 Expression of results

For each test specimen, calculate the heat reversion R for each pair of marks, as a percentage using the following formula

$$R = \frac{\Delta L}{L_0} \times 100$$

where

$$\Delta L = L_0 - L_1;$$

L_0 is the distance between the marks before heating in the oven in millimetres;

L_1 is the distance, between the marks, after heating in the oven in millimetres.

Where relevant, calculate for each test specimen the difference of the values of the heat reversion, ΔR , expressed as a percentage, between the two opposing surfaces, as defined in the referring standard.

10 Test report

The test report shall include the following information:

- a) reference to this document (i.e. EN 479);
- b) the test laboratory;
- c) full identification of the profile;

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- d) the date of testing;
- e) the distance between the marks before heating in the oven (L_0) for each pair of marks of each test specimen;
- f) the distance between the marks after heating in the oven (L_1) for each pair of marks of each test specimen;
- g) the value R for each pair of marks for each test specimen;
- h) the difference of the values of the heat reversion, ΔR , for each test piece, where relevant;
- i) all operating details not specified in this document, as well as any incidents likely to have influenced the results.

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