



**SLOVENSKI STANDARD**  
**SIST EN 2155-2:2001**

**01-junij-2001**

---

**Aerospace series - Test methods for transparent materials for aircraft glazing - Part 2: Determination of water absorption**

Aerospace series - Test methods for transparent materials for aircraft glazing - Part 2: Determination of water absorption

Luft- und Raumfahrt - Prüfverfahren für transparente Werkstoffe zur Verglasung von Luftfahrzeugen - Teil 2: Bestimmung der Wasseraufnahme

Série aérospatiale - Méthodes d'essais pour matériaux transparents pour vitrages aéronautiques - Partie 2: Détermination de l'absorption d'eau

<https://standards.iteh.ai/catalog/standards/sist/53265e83-a45a-457b-a269-828f63d5d2b5/sist-en-2155-2-2001>

**Ta slovenski standard je istoveten z: EN 2155-2:1993**

---

**ICS:**

49.045      Konstrukcija in konstrukcijski elementi      Structure and structure elements

**SIST EN 2155-2:2001**

**en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 2155-2:2001

<https://standards.iteh.ai/catalog/standards/sist/53265e83-a45a-457b-a269-828f63d5d2b5/sist-en-2155-2-2001>

EUROPEAN STANDARD

EN 2155-2:1993

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 1993

UDC 629.73.023.26:620.1:532.695.52

Descriptors: Aircraft industry, glazing, transparent plastics, glass, water, absorption tests

English version

**Aerospace series - Test methods for transparent  
materials for aircraft glazing - Part 2:  
Determination of water absorption**

**iTeh STANDARD PREVIEW**

Série aérospatiale - Méthodes d'essais pour  
matériaux transparents pour vitrages  
aéronautiques - Partie 2: Détermination de  
l'absorption d'eau

Luft- und Raumfahrt - Prüfverfahren für  
transparente Werkstoffe zur Verglasung von  
Luftfahrzeugen - Teil 2: Bestimmung der  
Wasseraufnahme

[SIST EN 2155-2:2001](https://standards.iteh.ai/catalog/standards/sist/53265e83-a45a-457b-a269-828f63d5d2b5/sist-en-2155-2-2001)

<https://standards.iteh.ai/catalog/standards/sist/53265e83-a45a-457b-a269-828f63d5d2b5/sist-en-2155-2-2001>

This European Standard was approved by CEN on 1993-01-04. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Page 2  
EN 2155-2:1993

### Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries and votes carried out in accordance with the rules of this Association, this Standard has successively received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

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 1993, and conflicting national standards shall be withdrawn at the latest by July 1993.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard :

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

## iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 2155-2:2001

[https://standards.iteh.ai/catalog/standards/sist/53265e83-a45a-457b-a269-](https://standards.iteh.ai/catalog/standards/sist/53265e83-a45a-457b-a269-828f9d5d2b5/sist-en-2155-2-2001)

[828f9d5d2b5/sist-en-2155-2-2001](https://standards.iteh.ai/catalog/standards/sist/53265e83-a45a-457b-a269-828f9d5d2b5/sist-en-2155-2-2001)

evolution of EN 2155

APPROVED

INTERNATIONAL STANDARDIZATION ORGANIZATION

APPROVED BY THE TECHNICAL COMMITTEE

## 1 Scope

This standard specifies the method used for the determination of the water absorption by means of immersion in conformance with ISO 62, method 1, applicable for transparent materials. In addition, it specifies the particular conditions for aircraft glazing.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ISO 62:1980      Plastics - Determination of water absorption

# iTeh STANDARD PREVIEW

## 3 Purpose of the method [standards.iteh.ai](https://standards.iteh.ai)

Indication of the behaviour of materials in certain moist conditions. The values do not represent the maximum amount of water that can be absorbed. The absorption of water can affect the dimensions and the electrical, thermal and mechanical properties.

## 4 Apparatus

- 4.1 Balance with an accuracy of 1 mg.
- 4.2 Oven which can be maintained at a temperature of  $(50 \pm 2)$  °C.
- 4.3 Vessel for distilled water maintained at  $(23 \pm 0,5)$  °C.
- 4.4 Desiccator.

## 5 Specimens

The specimen shall be  $(50 \pm 1)$  mm square with a thickness of  $(3,0 \pm 0,2)$  mm machined from the sheet under test.

Cut or machined surfaces shall be smooth and shall not show any burring.

## 6 Procedure

Three specimens are dried in an oven for  $(24 \pm 1)$  h at a temperature of  $(50 \pm 2)$  °C, cooled in a desiccator and each is weighed to the nearest 1 mg (mass  $m_1$ ).

They are then placed in distilled water maintained at a temperature of  $(23 \pm 0,5)$  °C.

Precautions are taken to prevent specimens from making contact over any substantial area, either with one another or with the container.

After  $(24 \pm 1)$  h they are taken from the water and all surface water removed with a clean dry cloth or with filter paper.

The specimens are weighed to the nearest 1 mg again within one minute of taking them from the water (mass  $m_2$ ).

NOTE : Specimens of different materials are not to be placed into the same container of distilled water.

## 7 Calculation and expression of results

The water absorption of a specimen ( $m_2 - m_1$ ) is expressed in milligrammes. The value recorded for the water absorption of the material under test is the arithmetic mean of the values obtained on the specimens.

The measured thicknesses of specimens and the masses  $m_1$  and  $m_2$  are to be recorded.

<https://standards.iteh.ai/catalog/standards/sist/53265e83-a45a-457b-a269-828f63d5d2b5/sist-en-2155-2-2001>

## 8 Test report

The test report shall include the following information :

- reference to this standard,
- the average water absorption in milligrams and individual values,
- the average thickness of specimens in millimetres and individual values,
- the average initial mass of specimens in grams and individual values.