

**Lennunduse ja kosmonautika seeria.
Läbipaistvate lennukiklaasimismaterjalide
katsemeetodid. Osa 14: 1/10 Vicat'
pehmenemistemperatuuri määramine**

Aerospace series - Test methods for transparent
materials for aircraft glazing - Part 14:
Determination of the 1/10 Vicat softening
temperature

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 2155-14:2000 sisaldab Euroopa standardi EN 2155-14:1993 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 11.01.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 2155-14:2000 consists of the English text of the European standard EN 2155-14:1993.

This standard is ratified with the order of Estonian Centre for Standardisation dated 11.01.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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EUROPEAN STANDARD

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English version

**Aerospace series - Test methods for transparent
materials for aircraft glazing - Part 14:
Determination of the 1/10 Vicat softening
temperature**

Série aérospatiale - Méthodes d'essais pour
matériaux transparents pour vitrages
aéronautiques - Partie 14: Détermination du
point de ramollissement Vicat 1/10

Luft- und Raumfahrt - Prüfverfahren für
transparente Werkstoffe zur Verglasung von
Luftfahrzeugen - Teil 14: Bestimmung der
1/10-Vicat Erweichungstemperatur

This European Standard was approved by CEN on 1993-02-19. 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.

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CEN

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

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

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 August 1993, and conflicting national standards shall be withdrawn at the latest by August 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

Introduction

The method described in this standard differs from ISO 306, method A, in the penetration depth.

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1 Scope

This standard specifies the method used for the determination of the 1/10 VICAT softening temperature of transparent thermoplastic materials used for aircraft glazing.

2 Principle

Determination of the temperature at which a standard indenter under a specified load penetrates 0,1 mm into the surface of a test specimen; this temperature is attained during a defined uniform rate of increase of temperature. The temperature corresponding to the 0,1 mm penetration is called 1/10 VICAT softening temperature; it is expressed in °C.

3 Apparatus

The apparatus consists essentially of

3.1 A rod provided with a load carrying plate, held in a rigid metal frame so that it can move freely and vertically, the base of the frame serving to support the specimen under the indenter at the end of the rod (see figure 1).

3.2 Indenting tip

An indenting tip, preferably of hardened steel, 3 mm long, of circular cross-section and area $(1,000 \pm 0,015) \text{ mm}^2$ is fixed at the bottom of the rod. The lower surface of the indenting tip shall be flat and perpendicular to the axis of the rod and free from burrs.

3.3 Micrometer dial gauge (or other suitable measuring instrument)

A micrometer dial gauge (or other suitable measuring instrument), graduated in divisions of 0,01 mm, shall be used to measure the penetration of the indenter into the specimen.

The thrust of the dial gauge, which contributes to the thrust on the specimen, shall be known and shall comply with clause 3.4 below.