Glass in building - Thermally toughened borosilicate safety glass - Part 1: Definition and description

Glass in building - Thermally toughened borosilicate safety glass - Part 1: Specifications



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13024-
1:2002 sisaldab Euroopa standardi EN
13024-1:2002 ingliskeelset teksti.

Käesolev dokument on jõustatud 18.10.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 13024-1:2002 consists of the English text of the European standard EN 13024-1:2002.

This document is endorsed on 18.10.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

Käsitlusala:

This European Standard specifies tolerances, flatness, edgework, fragmentation and physical and mechanical characteristics of monolithic flat thermally toughened borosilicate safety glass for use in buildings. Information on curved thermally toughened borosilicate safety glass is given in annex B, but this product does not form part of this standard.

Scope:

This European Standard specifies tolerances, flatness, edgework, fragmentation and physical and mechanical characteristics of monolithic flat thermally toughened borosilicate safety glass for use in buildings. Information on curved thermally toughened borosilicate safety glass is given in annex B, but this product does not form part of this standard.

ICS 81.040.20, 91.100.99

Võtmesõnad: construction, definition, definitions, depth, descriptions, glass, glass for building purposes, marking, materials testing, measurement, properties, safety glass, shallow, testing, tolerances, tolerances (measurement), toughened safety glass, ultimate behaviour

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN 13024-1

May 2002

ICS 81.040.20

English version

Glass in building - Thermally toughened borosilicate safety glass - Part 1: Definition and description

Verre dans la construction - Verre borosilicate de sécurité trempé thermiquement - Partie 1: Définition et description

Glas im Bauwesen - Thermisch vorgespanntes Borosilicat-Einscheiben-Sicherheitsglas - Teil 1: Definition und Beschreibung

This European Standard was approved by CEN on 27 December 2001.

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 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 Management Centre has the same status as the official versions.

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



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

EN 13024-1:2002 (E)

Contents

	2.		page	
Fore	word		4	
Intro	duction		5	
1	Scop	e	5	
2	Normative References			
3	Terms and definitions			
4	Glass products			
5	Fracture characteristics6			
6	Dime	ensions and tolerances	7	
Ū	6.1	Nominal thickness and thickness tolerances		
	6.2	Width and length (sizes)		
	6.3	Flatness		
7	Edge	work, holes, notches and cut-outs	13	
	7.1	Warning		
	7.2	Edge working of glass for toughening	13	
	7.3	Profiled edges		
	7.4	Round holes	15	
	7.5	Notches and cut-outs	18	
	7.6	Shaped panes	18	
8	Frag	mentation test	18	
	8.1	General	18	
	8.2	Dimensions and number of test specimens	18	
	8.3	Test procedure	18	
	8.4	Assessment of fragmentation	19	
	8.5	Minimum values from the particle count		
	8.6	Selection of the longest particle		
	8.7	Maximum length of longest particle	21	
9		r physical characteristics		
	9.1	Optical distortion		
	9.2	Anisotropy (iridescence)		
	9.3	Thermal durability		
	9.4	Mechanical strength		
	9.5	Classification of performance under accidental human impact	22	
10	Marl	king	22	
Anne	ex A (no	rmative) Determination of U value	23	
Anne	ex B (inf	formative) Curved thermally toughened borosilicate safety glass	24	

x C (informative).

Foreword

This document EN 13024-1:2002 has been prepared by Technical Committee CEN/TC 129 "Glass in building", the secretariat of which is held by IBN.

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 November 2002, and conflicting national standards shall be withdrawn at the latest by November 2002.

This European Standard forms part of a series of standards for thermally toughened borosilicate safety glass, the other part being: *Glass in building - Thermally toughened borosilicate safety glass - Part 2: Evaluation of conformity.*

Annex A is normative.

Annexes B and C are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Great A, Switze Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Thermally toughened borosilicate safety glass has a higher thermal shock resistance and a safer breakage behaviour when compared with annealed glass. When it should be used to offer protection under accidental human impact, thermally toughened borosilicate safety glass also should be classified according to prEN 12600.

NOTE CEN/TC129/WG8 is producing standards for the determination of the design strength of glass and is preparing a design method.

NOTE CEN/TC129/WG2 is preparing a standard for production control and evaluation of conformity.

1 Scope

This European Standard specifies tolerances, flatness, edgework, fragmentation and physical and mechanical characteristics of monolithic flat thermally toughened borosilicate safety glass for use in buildings.

Information on curved thermally toughened borosilicate safety glass is given in annex B, but this product does not form part of this standard.

Other requirements, not specified in this standard, can apply to thermally toughened borosilicate safety glass which is incorporated into assemblies, e.g. laminated glass or insulating units, or undergo an additional treatment, e.g. coating. The additional requirements are specified in the appropriate product standard. Thermally toughened borosilicate safety glass, in this case, does not lose its mechanical or thermal characteristics.

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 (including amendments).

EN 673, Glass in building – Determination of thermal transmittance (U value) – Calculation method. EN 1096-1, Glass in building – Coated glass – Part 1: Definitions and classification. EN 1748-1, Glass in building – Special Basic Products – Part 1: Borosilicate glasses. prEN 12600, Glass in building - Pendulum test - Impact test method for flat glass and performance requirements.