

Glass in building — Chemically strengthened soda lime silicate glass —

Part 1: Definition and description

The European Standard EN 12337-1:2000 has the status of a
British Standard

ICS 81.040.20

National foreword

This British Standard is the official English language version of EN 12337-1:2000.

The UK participation in its preparation was entrusted by Technical Committee B/520, Glass and glazing in building, to Subcommittee B/520/1, Basic and transformed glass products, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 19 and a back cover.

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Glas im Bauwesen – Chemisch vorgespanntes Kalknatronglas – Teil 1: Definition und Beschreibung

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Foreword

This European Standard 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of an identical text or by endorsement, at the latest by December 2000, and conflicting national standards shall be withdrawn at the latest by December 2000.

CEN/TC129/WG2 prepared a working draft.

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

Introduction

Chemically strengthened soda lime silicate glass has a higher resistance to thermal stress and an enhanced mechanical strength when compared to annealed glass.

NOTE 1: CEN/TC129/WG8 is producing standards for the determination of the design strength of glass and is preparing a design method.

NOTE 2: 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 flat chemically strengthened soda lime silicate glass for use in buildings.

Information on curved or profiled chemically strengthened soda lime silicate glass is given in annex B, but this product does not form part of this standard.

Chemically strengthened soda lime silicate glass, defined hereafter, can be incorporated into assemblies, e.g. laminated glass or insulating units, or undergo an additional treatment, e.g. coating, and will therefore also comply with the requirements of the appropriate finished product standard.

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 be 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.

EN 572-1	Glass in building – Basic soda lime silicate glass products – Part 1: Definitions and general physical and mechanical properties.
EN 572-2	Glass in building – Basic soda lime silicate glass products – Part 2: Float glass.
EN 572-4	Glass in building – Basic soda lime silicate glass products – Part 4: Drawn sheet glass.
EN 572-5	Glass in building – Basic soda lime silicate glass products – Part 5: Patterned glass.
EN 673	Glass in building – Determination of thermal transmittance (U value) – Calculation method.
EN 1288-3	Glass in building – Determination of bending strength of glass – Part 3: Test with specimen supported at two points (four point bending).

3 Definitions

For the purposes of this European Standard the following definitions apply.

3.1 chemically strengthened soda lime silicate glass:

glass made by subjecting a soda-lime silicate glass to an ion exchange process in order to give it increased resistance to mechanical and thermal stress. The small diameter ions in the glass surface and edges are replaced with larger diameter ones, which results in the glass surface and edges being placed into compression

3.2 flat chemically strengthened soda lime silicate glass:

a nominally flat piece of glass which has been strengthened. No specific profile results from the manufacturing process

4 Glass products

Chemically strengthened soda lime silicate glass products are made from a monolithic glass corresponding to one of the following standards:

- EN 572-1 for definitions and general physical and mechanical properties;
- EN 572-2 for float glass;
- EN 572-4 for drawn sheet glass;
- EN 572-5 for patterned glass.

Other soda lime silicate glass products conforming to the chemical composition given in EN 572-1 may also be used to manufacture chemically strengthened soda lime silicate glass.

5 Fracture characteristics

When chemically strengthened soda lime silicate glass is fractured, it breaks like annealed glass.

6 Dimensions and tolerances

6.1 Thickness

The nominal thicknesses and thickness tolerances are those given in the relevant product standard (see clause 4), which are reproduced in Table 1. There are a number of specific thicknesses, not included in EN 572-1, EN 572-2, EN 572-4 and EN 572-5 which are used for chemical strengthening and some of these are also included in Table 1. Other thicknesses can be available and the manufacturer should be consulted about the tolerances.

The thickness of a pane shall be determined as for the basic product. The measurement shall be taken at the centres of the 4 sides.