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Glass in building — Tempered soda lime silicate safety glass

Verre dans la construction — Verre silico-sodo-calcique de sécurité trempé

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by ISO/ TC 160, *Glass in building*, Subcommittee SC 1, *Product considerations*.

Introduction

Tempered soda lime silicate safety glass has a breakage behaviour that is different to annealed glass. This behaviour is a direct result of the high surface pre-stress.

Tempered soda lime silicate safety glass has a known behaviour under accident human impact together with known mechanical and thermal stress resistance.

NOTE 1 ISO/TC 160/SC 2 produces standards for the determination of the design strength of glass and is preparing a design method.

NOTE 2 In Europe, the term “thermally toughened” is used instead of “tempered”.

Glass in building — Tempered soda lime silicate safety glass

1 Scope

This document covers product definitions, product characteristics, i.e. tolerances, flatness, edgework, etc., fracture characteristics, including fragmentation, and the physical and mechanical characteristics of flat tempered soda lime silicate safety glass for use in buildings.

This document does not cover curved (bent) glass according to ISO 11485.

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

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1288-3, *Glass in building — Determination of the bending strength of glass — Part 3: Test with specimen supported at two points (four point bending)*

ISO 11479-1, *Glass in building — Coated glass — Part 1: Physical defects*

ISO 16293-1, *Glass in building — Basic soda lime silicate glass products — Part 1: Definitions and general physical and mechanical properties*

ISO 16293-2:—[1)], *Glass in building — Basic soda lime silicate glass products — Part 2: Float glass*

ISO 16293-5:—[1)], *Glass in building — Basic soda lime silicate glass products — Part 5: Patterned glass*

ISO 29584, *Glass in building — Pendulum impact testing and classification of safety glass*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

3.1
flat tempered safety glass
tempered (thermally toughened) glass which has not been deliberately given a specific profile during manufacture

1) Under preparation.