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**NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC
OF CHINA**

中华人民共和国国家标准

GB 15763.4—2009

**Safety glazing materials in building—
Part 4: Heat soaked thermally tempered glass**

建筑用安全玻璃 第4部分：均质钢化玻璃

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Contents

| | |
|------------------------------------------------------------------------------|----|
| Foreword | 1 |
| Introduction | 1 |
| 1 Scope | 1 |
| 2 Normative References | 1 |
| 3 Terms and definitions | 1 |
| 4 General principles | 2 |
| 5 Requirements | 2 |
| 6 Test methods | 4 |
| 7 Inspection rules | 5 |
| 8 Marking | 8 |
| 9 Packaging, transportation and storage | 8 |
| Annex A (Normative) Heat soak process cycle and system | 9 |
| Annex B (Normative) Bending strength test method | 13 |
| Annex C (Informative) Heat soak process system calibration test | 16 |

Foreword

Article 5.5, 5.6 and 5.7 in this Part are mandatory, the rest are recommendatory.

GB 15763 *Safety glazing materials in building* consists of four parts:

- Part 1: Fire-resistant glass;
- Part 2: Tempered glass;
- Part 3: Laminated glass;
- Part 4: Heat soaked thermally tempered glass.

This is part 4 of GB 15763.

This Part is not equivalent to EN 14179-1: 2005 *Glass in building — Heat soaked thermally toughened soda lime silicate safety glass — Part 1: Definition and description*.

Annex A and Annex B of this Standard are normative annex; Annex C is informative annex.

This Standard is proposed by China Building Materials Federation.

This Standard is under the jurisdiction of National Technical Committee on Glass in Building of Standardization Administration of China.

The responsible drafting organization is China Building Material Test & Certification Center.

The participate drafting organizations are Guangdong Golden Glass Technologies Ltd, Zhejiang Hehe Holding Group Co., Ltd, CSG Holding Co., Ltd, Shanghai Yaohua Pilkington Glass Group Co., Ltd, Jiangsu Xiuqiang Glasswork Co., Ltd, Shenzhen Sanxin Special Glass Technology Co., Ltd, Beijing Wuhua Tianbao Glass Co., Ltd, Zhejiang Zhongli Holding Group., Ltd, Jiangmen Yinhui Safety Glass Co., Ltd, Shenzhen Handong Glass Machinery Co., Ltd and Wuxi Dayangglass Decoration Engineering Co., Ltd.

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This Part is issued for the first time.

Introduction

Ordinary annealed glass becomes tempered glass after heat treatment, with a compressive stress layer formed on the glass surface, which improves the mechanical strength and heat-resisting impact strength of glass, and is in a special form of fragment. Tempered glass as a kind of safety glass is widely used in building and other fields.

In China, there is a large amount of tempered glass used in building walls every year, but spontaneous explosion of tempered glass has greatly limited its application. After long-term tracking and study, it is found that the nickel sulfide (NiS) stone inside the glass is the main cause of spontaneous explosion of tempered glass. Studies have shown that homogenization of tempered glass (the second heat treatment process) can greatly reduce the spontaneous explosion rate of tempered glass. However, improper temperature control during the homogenization will cause reverse or incomplete phase transition of NiS, and will even lead to tempering stress relaxation, affecting the safety performance of final product.

This standard is to:

- a) Clearly specify the performance of heat soaked thermally tempered glass. Impact resistance, fragment state and shot-bag impact performance involve the safe use of products, which are the mandatory requirements; other technical requirements can be used for quality monitoring of daily production.
- b) Specify homogenization process and system to standardize the homogenization process and provide technical support for quality assurance of heat soaked thermally tempered glass.
- c) Based on the particularity of heat soaked thermally tempered glass products, this Standard contain special provisions on the sampling methods of product type inspection to ensure the authenticity and reliability of test samples.

Safety glazing materials in building—

Part 4: Heat soaked thermally tempered glass

1 Scope

This Part specifies the terms and definitions, general provisions, requirements, test methods, inspection rules, marking, packaging, transportation and storage of heat soaked thermally tempered glass for building.

The part of GB15763 applies to heat soaked thermally tempered glass in building. If there is no corresponding product standards for heat soaked thermally tempered glass except that in building (e.g. industrial equipment, furniture, etc.), this part can provide a reference.

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB 15763.2 Safety glazing materials in building--Part 2: Tempered glass

3 Terms and definitions

For the purpose of this Part, following terms and definitions apply.

3.1

heat soaked thermally tempered glass

Hot-dip tempered glass is soda-lime-silica tempered (HST) glass after treatment under specific process conditions.

NOTE: For the specific process conditions, see Annex A.



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