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

GB/T 15728-2021

Replacing GB/T 15728-1995

**Glass resistance to attack by a boiling hydrochloric acid
gravimetric method of test and classification**

玻璃耐沸腾盐酸侵蚀性的重量试验方法和分级

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part

1. Structure and Drafting Rules of Standardization Documents" Drafting. This document replaces GB/T 15728-1995 "Glass weight test method and classification of boiling hydrochloric acid corrosion resistance", and Compared with GB/T 15728-1995, the main technical changes except for editorial changes are as follows:

---Added normative reference documents (see Chapter 2);

---The number of samples has been increased (see 7.3);

--- Change the "Bunsen burner" in the test device to a "controllable temperature device" (see Chapter 8, Chapter 6 of the.1995 edition). Please note that some of the contents of this document may involve patents. The issuing agency of this document is not responsible for identifying patents. This document was proposed by the China National Light Industry Council. This document is under the jurisdiction of the National Glass Instrument Standardization Technical Committee (SAC/TC178). Drafting organization of this document. National Light Industry Glass Product Quality Supervision and Testing Center. The main drafters of this document. Yuan Chunmei, Du Yuhai, Liang Ye. The previous versions of this document and the documents replaced are as follows:

---In.1995, it was first published as GB/T 15728-1995;

---This is the first revision. Weight test of resistance of glass to boiling hydrochloric acid Method and classification

1 Scope

GB/T 15728-2021 is the Chinese national standard on glass resistance to attack by a boiling hydrochloric acid gravimetric method of test and classification, in the field of glass and ceramics industries. The /T suffix marks it as a recommended standard: it is not

compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 20 August 2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2022. Classification: ICS 81.040.01, CCS N64. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the principles, reagents, instruments or materials for determining the corrosion resistance of glass in a boiling 6mol/L hydrochloric acid solution by gravimetric method. Preparation of materials and samples, test procedures, results presentation methods and test reports. This document is applicable to the acid resistance test and classification of various glasses.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to This document.

GB/T 620 Chemical reagent hydrofluoric acid

GB/T 622 Chemical reagent hydrochloric acid

GB/T 678 Chemical reagent ethanol (anhydrous ethanol)

GB/T 686 Chemical reagent acetone

GB/T 6682 Analytical laboratory water specifications and test methods

3 Terms and definitions

There are no terms and definitions that need to be defined in this document.

4 Principle

A glass sample with a total surface area of about 100cm², eroded in a boiling 6.0mol/L±0.2mol/L hydrochloric acid solution for 6h, measurement unit The mass of the surface area lost. The corrosion resistance of glass is expressed by the quality of its unit surface loss, and the glass is Carry out classification.

5 Reagents

5.1 Use reagents of analytical grade and above.

5.2 Distilled water or deionized water. should meet the requirements of GB/T 6682 level 2 and above.

5.3 Acetone. should meet the requirements of GB/T 686.

5.4 Anhydrous ethanol. should meet the requirements of GB/T 678.

5.5 Hydrochloric acid. Should meet the requirements of GB/T 622, it should be prepared into 6.0mol/L $\pm$ 0.2mol/L solution and 2mol/L solution with hydrochloric acid.

5.6 Hydrofluoric acid (GB/T 620). HF content $\geq$ 40.0% (mass fraction).