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

GB/T 46602-2025

**Vitreous and porcelain enamels - Determination of surface
scratch hardness according to the Mohs scale**

搪瓷制品和瓷釉 莫氏硬度法测定表面耐刻划硬度

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

This document modifies and adopts ISO 6769:2022 "Enamelled articles and enamels, Mohs hardness method for determination of scratch resistance of surfaces". This document is consistent with... The technical differences in ISO 6769:2022 and the reasons for them are as follows.

---ISO 28764 (see Chapter 6) has been replaced with the normatively referenced GB/T 38166 to adapt to my country's technical conditions and add [further details needed]. Operability. The following editorial changes have been made to this document.

---Added a description of the scope of application;

---Notes in 7.2 have been added to adapt to my country's technical conditions and increase operability.

1 Scope

This document describes a method for determining the scratch hardness of enamelware and porcelain glaze surfaces using the Mohs hardness method.

This document is applicable to the determination of the scratch hardness of steel plate enamel, aluminum enamel and cast iron enamel.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this

document; for undated references, the latest version (including all amendments) applies to this document.

GB/T 38166 Sample preparation for steel plate enamel, aluminum enamel and cast iron enamel (GB/T 38166-2019, ISO 28764:2015) MOD)

Calcite 3 Fluorite 4 Apatite 5

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Mohs hardness

The hardness grade of a mineral is a measure of its scratch resistance by the ability of a harder mineral to scratch a softer mineral.

The surface Mohs hardness is determined by whether a standard mineral with a specific Mohs hardness produces scratches when manually scratching the sample surface.

5 Standard Minerals

The standard minerals and their Mohs hardness are shown in Table 1.