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

GB/T 37773-2019

Enamel coatings applied to steel for writing surfaces

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Foreword

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard uses the redrafting method to modify the ISO 28762.2010 "enamel writing plate steel enamel specification".

This standard is structurally adjusted as follows in comparison with ISO 28762.2010.

--- Added Appendix A (Normative Appendix) "Test Method for Measuring Relative Wear Resistance of Taber Wear Machines";

--- Added Appendix B (normative appendix) "Mohs hardness method for determining the scratch resistance of enamel surface".

The technical differences between this standard and ISO 28762.2010 and their reasons are as follows.

--- For the normative reference documents, this standard has been technically adjusted to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

- * Replace ISO 2178 with GB/T 4956, which is equivalent to the international standard;

- Replace ISO 2813 and ISO 2813.1994/Cor.1.1997 with GB/T 9754 equivalent to the international standard;

- * Replace ISO 7724-1 with GB/T 11186.1 equivalent to the international standard;

- * Replace ISO 7724-2 with GB/T 11186.2 equivalent to the international standard;

- * Replace ISO 7724-3 with GB/T 11186.3 equivalent to the international standard;

- * Replaced EN10209.1996 with GB/T 13790-2008 modified to adopt international standards;

- * Replaced ISO 15695 and ISO 15695.2000/Cor.1 with GB/T 30199-2013 modified to international standards.

2000;

- * Increased references to GB/T 308.1 and GB/T 31567-2015;

- * ISO 4532, EN15771, and ASTM C501 have been removed.

--- To increase operability, ISO 4532 referenced in 6.3 of ISO 28762.2010 was modified to the ball drop test.

--- In order to adapt to the market demand, the requirements of Chapter 9 for graffiti resistance have been revised, and "or by contractual parties to negotiate" has been added.

--- For ease of use, the relevant content of ASTM C501 referenced in 6.2 of ISO 28762.2010 is listed in Appendix A.

--- For ease of use, the relevant content of EN15771 referenced in 6.4 of ISO 28762.2010 is listed in Appendix B.

This standard has made the following editorial changes.

--- Modified the standard name.

This standard was proposed by the China Machinery Industry Federation.

This standard is under the jurisdiction of the National Technical Committee for Standardization of Metal and Non-Metallic Coatings (SAC/TC57).

This standard was drafted. National Eyeglass Glass Enamel Product Quality Supervision and Inspection Center, Donghua University.

1 Scope

This standard specifies the performance and aesthetic characteristics of steel enamels used for writing boards (whiteboards and chalk boards).

This standard applies to enamel writing plates made of steel plate substrates, including whiteboards and chalk boards.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 308.1 Rolling ball - Part 1. Steel ball (GB/T 308.1-2013, ISO 3290-1.2008, NEQ)

GB/T 4956 magnetic non-magnetic covering layer coating thickness measurement magnetic method (GB/T 4956-2003,

ISO 2178.1982, IDT)

GB/T 9754 Determination of 20°, 60° and 85° specular gloss of paints and varnishes without metallic pigments (GB/T 9754-

2007, ISO 2813.1994, IDT)

Iron and steel -- Determination of resistance to chemical attack -- Part 1 . Determination of acid corrosion at room temperature (ISO 28706-

1.2008, IDT)

GB/T 11186.1 Method for measuring colour of paint films Part 1. Principles (GB/T 11186.1-1989, eqv ISO 7724-1.

1984)

GB/T 11186.2 Method of measurement of colour of paint film - Part 2. colour measurement (GB/T 11186.2-1989, eqvISO 7724-

2 1984)

GB/T 11186.3 Method of measurement of colour of paint film Part 3. Calculation of colour difference (GB/T 11186.3-1989, eqvISO 7724-

3 1984)

GB/T 13790-2008 Cold rolled low carbon steel sheets and strips for enamel
(EN10209.1996, MOD)

GB/T 30199-2013 Determination of scratch resistance of glass-lined layers (ISO
15695.2000, MOD)

GB/T 31567-2015 Enamel heat exchange elements for air-smoke, flue gas-smoke
regenerative heat exchangers (ISO 28763.

2008, MOD)

3 Terms and definitions

The following terms and definitions apply to this document.

3.1

Enamel vitreous enamel; porcelain enamel

The inorganic vitreous material is a composite material that is fused to the base metal at a high temperature and forms a strong bond with the metal.

Note 1. This material can be used for protection, functional or decorative purposes.

Note 2. The material is produced by coating dry powder or powdered inorganic glass material suspended in an aqueous solution on a metal surface and then fusion bonding.

The coefficient of bulk expansion in the range of 20 ° C ~ 100 ° C is $150 \times 10^{-7}/K \sim 450 \times 10^{-7}/K$, the actual value of the substrate with the type of substrate and the collar of the coating

The domain changes.

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Writing board steel enamel

(ISO 28762.2010, Vitreous and porcelain enamels-Enamel coatings

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