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

**GB/T 7410-1987**

Replacing GB/T 7410-1987

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**Vitreous and porcelain enamels - Terminology - Part 1: Terms  
and definitions**

**(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".

Drafting.

This document is Part 1 of GB/T 7410, "Terminology for Enamelware and Enamel Glazes". GB/T 7410 has already published the following parts.

---Part 1: Terms and Definitions this document replaces GB/T 7410-1987 "Enamel Terminology". Compared with GB/T 7410-1987, the main differences are structural adjustments and editorial changes.

Aside from the modifications, the main technical changes are as follows.

a) Added terms and definitions for the preparation of metal blanks, electrostatic dry powder, and dry cast iron enamel powder in the general terminology (see 3.1.2.2, 3.1.2.12, 3.1.2.13);

b) Added terms and definitions for enamel-lined aluminum, enamel-lined cast iron, enamel-lined steel sheet, cold-rolled steel, hot-rolled steel, and decarburized steel to the terminology for metallic substrates (see...).

3.1.5.1~3.1.5.6);

c) Added antioxidants, decoction agents, antibacterial agents, neutralizing agents, fillers, rust inhibitors, screen printing inks, and media to the terminology for frit components.

Terms and definitions (see 3.2.1.7 to 3.2.1.14);

d) The definition of the term "titanium dioxide glaze" has been changed (see 3.2.4.1, 2.4.1 of the 1987 edition);

e) Added the terminology and definition for titanium glaze in the terminology for surface glaze types (see 3.2.4.2);

f) Added terms and definitions for pretreatment agents in the terminology for glaze slurry and glaze powder composition (see 3.2.6.5);

g) Added terms and definitions for shot blasting, color matching, shot blasting, and steam degreasing in the terminology for surface treatment of metal billets (see 3.2.9.7).

3.2.9.10~3.2.9.12);

h) Added the following terms to the enameling process terminology. direct enameling, traditional enameling, glazing, dipping, dry powder coating, dry spraying, hot sprinkling, pouring enameling, and powder coating.

Terms and definitions for powder coating, edge removal enamel, granulation, and edge coating (see 3.2.10.9, 3.2.10.12~3.2.10.22);

i) Added terms and definitions for decal paper in the terminology of decorative crafts (see 3.2.11.10);

j) Added terms and definitions for powder coating and gas sealing in the firing process terminology (see 3.2.12.2, 3.2.12.8);

k) Added terms and definitions for trimming in the rework process terminology (see 3.2.13.7);

l) Added terms and definitions for powder adhesion, coefficient of expansion, recovery time, and spray rate in the process parameter terminology (see...).

3.2.14.13~3.2.14.16);

m) Added the terminology and definition for direct firing furnace in the terminology of melting equipment (see 3.3.1.6);

n) Added terms and definitions for orifice brushes, Ford cups, recirculating immersion

tanks, glaze consistency meters, and spray guns in the terminology for enamel coating equipment and tools (see n).

3.3.2.9~3.3.2.13);

o) Added terms and definitions for trimming brush, acid pickling basket, and triangular firing rack in the terminology for firing tools (see 3.3.4.7~3.3.4.9);

p) Added terms and definitions for two-layer enameling and one-firing products in the enamel terminology classified by process (see 3.4.1.6);

q) Added the terminology and definition for matte enamel in the enamel terminology classification by characteristics (see 3.4.3.1);

r) In the terminology definition of glass-lined containers, "equipment" is changed to "non-pressure vessel" (see 3.4.4.6);

s) Added terms and definitions for daily-use products/hollow products and assembled cans in the classification terms by application (see 3.4.4.9, 3.4.4.10);

t) Added other classification terms such as self-colored enamel, granite-patterned enamel, translucent enamel, writing board enamel, easy-clean enamel, and static enamel.

Terminology and definitions for electro-enamel and pre-ground powder (see 3.4.5.1~3.4.5.7);

u) Added terms and definitions for flowability, rheology, thixotropy, and viscosity to the performance terminology of glaze powders and glaze slurries (see 3.5.2.5~).

3.5.2.8);

v) Added the following terms to the performance terminology for enamel products. stainability,, chemical resistance, melt resistance, porosity,, smoothness, and solubility.

Terminology and definitions for degree (see 3.5.3.20~3.5.3.27);

w) Added terms and definitions to the terminology for defects in metal billets and powder blanks, including pulverization, Faraday cage effect, rolled scale, and oxide scale (see...).

3.6.1.6~3.6.1.9);

x) Added the following product defect terms. black spots, etching, pearl lines, weld bubbles, pigskin wrinkles, pits, pores, ripples, slippage, peeling, and pearl.

Bubbles, broken bubbles, sags, bumps, marble effect, blooming, marks, discontinuities, flow lines, sagging, cracking, delayed fish scale bursts, waves Terms and definitions for wavy lines, overspray, and reverse emission (see 3.6.2.35~3.6.2.59);

y) Added terms and definitions for the wire drawing test in the terminology of frit testing (see 3.7.1.3);

z) Added terms and definitions for fineness test and bulk density test in the terminology for testing glaze slurry and glaze powder (see 3.7.2.4, 3.7.2.5);

aa) The definition of the terminology for sodium carbonate solution erosion testing has been changed (see 3.7.3.16, 7.3.14 in the 1987 edition);

bb) Added terms and definitions for impact test, sponge test, and swab test in the product testing terminology (see 3.7.3.20~3.7.3.22);

(cc) The terminology and definition of "fragmentation" have been removed (see 2.7.3 of the 1987 edition);

The terminology and definition for milling machines have been removed (see 3.1.7 of the 1987 edition).

This document is modified to adopt ISO 19496-1:2017 "Enamelware and enamelware terminology - Part 1: Terms and definitions".

This document has undergone significant structural adjustments compared to ISO 19496-1:2017. A comparison of the structural numbering changes between the two documents is provided below.

See Appendix A for the table.

This document differs significantly from ISO 19496-1:2017. The relevant clauses are indicated in vertical margins.

Straight lines (|) are marked. A summary of these technical differences and their reasons can be found in Appendix B.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Metallic and Non-metallic Coatings (SAC/TC57).

## Introduction

GB/T 7410 aims to standardize the professional terms and definitions involved in enamel products and porcelain glaze products, and is proposed to consist of two parts.

---Part 1: Terms and Definitions. The purpose is to regulate the use of terms and definitions in the field of enamelware and porcelain glazes by clearly defining these terms and definitions.

Application of terminology in the enamel industry.

---Part 2: Appearance and Description. The purpose is to vividly illustrate the defects and