SLOVENSKI STANDARD
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Steklasti in keramični emajli - Terminologija - 1. del: Izrazi in definicije (ISO 19496-1:2017)

Vitreous and porcelain enamels - Terminology - Part 1: Terms and definitions (ISO 19496-1:2017)

Emails und Emaillierungen - Terminologie - Teil 1: Begriffe (ISO 19496-1:2017)

Emaux vitrifiés - Terminologie - Partie 1: Termes et définitions (ISO 19496-1:2017)

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EUROPEAN STANDARD

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Supersedes EN 15826:2009

English Version

Vitreous and porcelain enamels - Terminology - Part 1: Terms and definitions (ISO 19496-1:2017)

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European foreword

This document (EN ISO 19496-1:2017) has been prepared by Technical Committee ISO/TC 107 “Metallic and other inorganic coatings” in collaboration with Technical Committee CEN/TC 262 “Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys” the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

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INTERNATIONAL STANDARD

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Vitreous and porcelain enamels — Terminology —

Part 1: Terms and definitions

Emaux vitrifiés — Terminologie —

Partie 1: Termes et définitions

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*.

A list of all parts in the ISO 19496 series can be found on the ISO website.

Vitreous and porcelain enamels — Terminology —

Part 1: Terms and definitions

1 Scope

This document defines a number of terms relating to vitreous and porcelain enamels and their technology. This list is not complete and only comprises those terms for which the definition is considered necessary for correct and adequate understanding in order to clarify these processes.

The interpretations given are those corresponding to the practical usage in this field and they do not necessarily coincide with those used in other fields.

For purposes of clarification, the term “vitreous enamel”, used throughout this document, is synonymous with “porcelain enamel”, the term favoured in the United States and some other countries.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

NOTE Annex A lists alternative terms and cross refers to primary terms used below.

3.1
abrasive blasting
process for *cleaning* (3.44) or finishing by means of an abrasive directed at high velocity against the work piece

3.2
abrasion resistance
degree of resistance of *vitreous enamel* (3.255) to be abraded by solid materials

3.3
acid resistance
degree of resistance of *vitreous enamel* (3.255) to attack by acidic corrosive chemicals

3.4
adherence
adhesion
<enamel-metallic substrate> degree of bonding between the fused *vitreous enamel* (3.255) and the metallic substrate

3.5
adherence of powder
ability of a vitreous enamel powder to remain attached by static attraction to a grounded *substrate* (3.242) before *firing* (3.111)

3.6
ageing
change in properties of vitreous enamel slips, powders, reagents, or steel with the lapse of time

3.7
air seal
air curtain
flow of pressurized air across the entrance and exit of a *continuous furnace* (3.53) that prevents heat escaping from the furnace but allows ware to pass through

3.8
alkali degreasing
removal of oil, grease, lubricants, and loose debris from the surface of the metallic substrate by immersion or spraying with an aqueous alkali degreaser in preparation for *vitreous enamelling* (3.256)

3.9
alkali resistance
degree of resistance of *vitreous enamel* (3.255) to attack by alkaline corrosive mediums

3.10
aluminium enamel
vitreous enamel (3.255) specifically formulated for application on aluminium substrates

3.11
anneal
annealing
thermal treatment of metals generally made by controlled heating and subsequent cooling

Note 1 to entry: Raw castings are heated in the range from 650 °C to 950 °C to relieve stresses and strains, burn off grease and in some cases to change the structure of the iron and in so doing improve the castings condition prior to coating with vitreous enamel.

3.12
anti-scale compound
agent that is applied to furnace tooling and other items to protect them from *scaling* (3.210) during *firing* (3.111)

3.13
back emission
back ionization
<electrostatic powder> defect often with the appearance of localized, very heavy *orange peel* (3.160), due to excessive charge build-up in the powder film resulting in electrical breakdown of air (i.e. back emission)

Note 1 to entry: The effect of the self-limiting characteristics of the electrostatic powder during application.

3.14
ball mill
ceramic or ceramic-lined rotating cylinder in which vitreous enamel materials are either wet or dry ground, generally using alumina, porcelain or steatite balls as grinding media

3.15
batch smelter
discontinuous smelter
smelter which is charged, fired, and discharged according to a predetermined periodic cycle

3.16
bead
defect resulting from accumulation of *vitreous enamel* (3.255) usually at the point where the enamel drains off the ware in *dipping* (3.78) (3.79)