ICS 25.220.50 SLOVENSKÁ TECHNICKÁ NORMA Jún 2025

STN	**Sklené a porcelánové smalty Technologické zariadenia na smaltovanie Časť 2: Označovanie a špecifikácia odolnosti proti chemickému poškodeniu a tepelnému šoku (ISO 28721-2: 2025)**	**STN EN ISO 28721-2** 94 5066

Vitreous and porcelain enamels - Glass-lined apparatus for process plants - Part 2: Designation and specification of resistance to chemical attack and thermal shock (ISO 28721-2:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/25

Obsahuje: EN ISO 28721-2:2025, ISO 28721-2:2025

Oznámením tejto normy sa ruší
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EUROPEAN STANDARD

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EN ISO 28721-2

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Supersedes EN ISO 28721-2:2015

English Version

Vitreous and porcelain enamels - Glass-lined apparatus for process plants - Part 2: Designation and specification of resistance to chemical attack and thermal shock (ISO 28721-2:2025)

Émaux vitrifiés - Appareils émaillés pour les installations industrielles - Partie 2: Désignation et spécifications de la résistance à l'attaque chimique et au choc thermique (ISO 28721-2:2025)

Emails und Emaillierungen - Emaillierte Apparate für verfahrenstechnische Anlagen - Teil 2: Bezeichnung und Festlegung der chemischen und Temperaturschockbeständigkeit (ISO 28721-2:2025)

This European Standard was approved by CEN on 3 February 2025.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 28721-2:2025) 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of an identical text or by endorsement, at the latest by August 2025, and conflicting national standards shall be withdrawn at the latest by August 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 28721-2:2015.

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Endorsement notice

The text of ISO 28721-2:2025 has been approved by CEN as EN ISO 28721-2:2025 without any modification.

International Standard

ISO 28721-2

Third edition
2025-02

Vitreous and porcelain enamels — Glass-lined apparatus for process plants —

Part 2: Designation and specification of resistance to chemical attack and thermal shock

Émaux vitrifiés — Appareils émaillés pour les installations industrielles —

Partie 2: Désignation et spécifications de la résistance à l'attaque chimique et au choc thermique

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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 document 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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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 262, *Metallic and other inorganic coatings, including for corrosion protection and corrosion testing of metals and alloys*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 28721-2:2015), which has been technically revised.

The main changes are as follows:

— The normative references have been updated.

— Terms and definitions have been added.

— The crack formation temperature determination has been updated.

A list of all parts in the ISO 28721 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The performance of an enamelled article can be influenced by both the chemical composition of a vitreous enamel and the specific enamelling process. In order to ascribe measurable attributes to enamel besides its general designation, the manufacturer conducts standardized tests. The enamel is categorized in terms of the resulting resistance to corrosion and thermal shock.

The quality requirements specified in this document represent the minimum requirements a chemical enamel is expected to meet based on the current state of the art.

International Standard **ISO 28721-2:2025(en)**

Vitreous and porcelain enamels — Glass-lined apparatus for process plants —

Part 2: Designation and specification of resistance to chemical attack and thermal shock

WARNING — This document calls for the use of either substances or procedures, or both, that can be injurious to health if adequate safety measures are not taken. This document does not address any health hazards, safety or environmental matters associated with its use. It is the responsibility of the user of this document to establish appropriate health, safety and environment practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This document specifies requirements for the resistance of chemical enamels to chemical attack and thermal shock, as well as their designation, for ordering purposes.

It is applicable to enamels used in glass-lined apparatus, piping and other components, primarily used in process equipment in chemical plants, which are applied on to low-alloy carbon steels substrates.

NOTE The main criteria for assessing enamel quality are its resistance to chemical attack and thermal shock, and the structure of the cover coat enamel.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 13807, *Vitreous and porcelain enamels — Determination of crack formation temperature in the thermal shock testing of enamels for the chemical industry*

ISO 19496-1, *Vitreous and porcelain enamels — Terminology — Part 1: Terms and definitions*

ISO 28706-2, *Vitreous and porcelain enamels — Determination of resistance to chemical corrosion — Part 2: Determination of resistance to chemical corrosion by boiling acids, boiling neutral liquids, alkaline liquids and/or their vapours*

ISO 28706-4, *Vitreous and porcelain enamels — Determination of resistance to chemical corrosion — Part 4: Determination of resistance to chemical corrosion by alkaline liquids using a cylindrical vessel*