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Standards

Irish Standard  
I.S. EN ISO 28721-1:2011

# Vitreous and porcelain enamels - Glass-lined apparatus for process plants - Part 1: Quality requirements for apparatus, components, appliances and accessories (ISO 28721-1:2008)

## I.S. EN ISO 28721-1:2011

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*This document replaces:*  
EN 15159-1:2006

*This document is based on:*  
EN ISO 28721-1:2011

*Published:*  
27 April, 2011

This document was published  
under the authority of the NSAI  
and comes into effect on:  
27 April, 2011

ICS number:  
25.220.50

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English Version

**Vitreous and porcelain enamels - Glass-lined apparatus for process plants - Part 1: Quality requirements for apparatus, components, appliances and accessories (ISO 28721-1:2008)**

Émaux vitrifiés - Appareils émaillés pour les installations industrielles - Partie 1: Exigences de qualité relatives aux appareillages, composants, appareils et accessoires (ISO 28721-1:2008)

Emails und Emailierungen - Emailierte Apparate für verfahrenstechnische Anlagen - Teil 1: Qualitätsanforderungen für Apparate, Apparateteile, Einbau- und Zubehörteile (ISO 28721-1:2008)

This European Standard was approved by CEN on 17 March 2011.

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## **Foreword**

The text of ISO 28721-1:2008 has been prepared by Technical Committee ISO/TC 107 “Metallic and other inorganic coatings” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 28721-1:2011 by Technical Committee CEN/TC 262 “Metallic and other inorganic coatings” 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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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

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### **Endorsement notice**

The text of ISO 28721-1:2008 has been approved by CEN as a EN ISO 28721-1:2011 without any modification.

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I.S. EN ISO 28721-1:2011  
**INTERNATIONAL  
STANDARD**

**ISO  
28721-1**

First edition  
2008-12-01

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

**Part 1:  
Quality requirements for apparatus,  
components, appliances and accessories**

*Émaux vitrifiés — Appareils émaillés pour les installations  
industrielles —*

*Partie 1: Exigences de qualité relatives aux appareillages, composants,  
appareils et accessoires*



Reference number  
ISO 28721-1:2008(E)

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Published in Switzerland



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 28721-1 was prepared by the European Committee for Standardization (CEN) (as EN 15159-1) and was adopted, under a special “fast-track procedure”, by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, in parallel with its approval by the ISO member bodies.

ISO 28721-1 consists of the following parts, under the general title *Vitreous and porcelain enamels — Glass-lined apparatus for process plants*:

- *Part 1: Quality requirements for apparatus, components, appliances and accessories*
- *Part 2: Designation and specification of resistance to chemical attack and thermal shock*
- *Part 3: Thermal shock resistance*

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

## Part 1: Quality requirements for apparatus, components, appliances and accessories

### 1 Scope

This part of ISO 28721 specifies the quality requirements for apparatus, components, appliances and accessories of glass-lined steel (including semi-crystallized enamel coatings) and glass-lined steel castings used for process plants. It specifies the quality requirements and the tests to be carried out by the manufacturer as well as the action to be taken to repair defects.

It is also applicable to glass-lined pumps, pump components and fittings.

It is not applicable to glass-lined flanged steel pipes or glass-lined flanged steel fittings.

NOTE 1 Provisions for glass-lined flanged steel pipes and glass-lined flanged steel fittings are given in DIN 2876 <sup>[1]</sup>.

The test methods specified cover checking the enamel, the dimensional accuracy and the performance of apparatus and components.

This part of ISO 28721 applies to new apparatus and components as well as used items that have been re-enamelled.

It does not contain requirements regarding the chemical or physical properties of vitreous and porcelain enamels.

NOTE 2 Examples of test reports are given in Annex A.

### 2 Normative references

The following referenced documents are indispensable for the application 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 780, *Packaging — Pictorial marking for handling of goods*

ISO 2178, *Non-magnetic coatings on magnetic substrates — Measurement of coating thickness — Magnetic method*

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

ISO 28721-3, *Vitreous and porcelain enamels — Glass-lined apparatus for process plants — Part 3: Thermal shock resistance*

EN 14430, *Vitreous and porcelain enamels — High voltage test*

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