INTERNATIONAL STANDARD

ISO 13807

First edition
1999-12-01

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

Émaux vitrifiés — Détermination de la température de fissuration par choc thermique d'émaux pour l'industrie chimique

Reference number
ISO 13807:1999(E)

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Printed in Switzerland

Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 13807 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*.

Annex A of this International Standard is for information only.

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

1 Scope

This International Standard specifies a test method for the determination of the crack formation temperature of enamels for the chemical industry by subjecting enamelled steel specimens to thermal shock using cold water.

The value of the crack formation temperature measured according to this test method is not valid for the finished component (see annex A). It is a parameter of vitreous and porcelain enamels for comparing the relative quality of different enamel formulations.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 2746, *Vitreous and porcelain enamels — Enamelled articles for service under highly corrosive conditions — High voltage test.*

ISO 2808, *Paints and varnishes — Determination of film thickness.*

IS0 3819, *Laboratory glassware — Beakers.*

ISO 10141, *Vitreous and porcelain enamels — Vocabulary.*

3 Terms and definitions

For the purposes of this International Standard, the terms and definitions given in ISO 10141 as well as the following apply.

3.1
crack formation temperature
thermal shock temperature at which the first damage to the enamel occurs in the form of cracks and/or chipping

3.2
thermal shock temperature
temperature of the specimen immediately before quenching with cold water