

**Thermal insulating products for
building equipment and industrial
installations - Determination of trace
quantities of water soluble chloride,
fluoride, silicate, sodium ions and pH**

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quantities of water soluble chloride, fluoride, silicate,
sodium ions and pH

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 13468:2002 sisaldab Euroopa standardi EN 13468:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 14.03.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 13468:2002 consists of the English text of the European standard EN 13468:2001.</p> <p>This document is endorsed on 14.03.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This standard specifies the equipment and procedures for determining trace quantities of the water soluble chloride, fluoride, silicate and sodium ions in an aqueous extract of the product. It also describes a procedure for the determination of the pH of the aqueous extract. The standard is applicable to thermal insulating products.</p>	<p>Scope:</p> <p>This standard specifies the equipment and procedures for determining trace quantities of the water soluble chloride, fluoride, silicate and sodium ions in an aqueous extract of the product. It also describes a procedure for the determination of the pH of the aqueous extract. The standard is applicable to thermal insulating products.</p>
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ICS 91.100.60

Võtmesõnad: building equipment, determination, procedures, products, thermal insulation, trace quantities, tracers

ICS 91.100.60

English version

Thermal insulating products for building equipment and industrial installations - Determination of trace quantities of water soluble chloride, fluoride, silicate, sodium ions and pH

Produits isolants thermiques pour l'équipement du bâtiment et les installations industrielles - Détermination des faibles quantités d'ions chlorure, fluorure, silicate et sodium solubles dans l'eau et mesure du pH

Wärmedämmstoffe für die Haustechnik und für betriebstechnische Anlagen - Bestimmung des Gehalts von wasserlöslichen Chlorid-, Fluorid-, Silikat- und Natrium-Ionen und des pH-Wertes

This European Standard was approved by CEN on 18 August 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 88 "Thermal insulating materials and products", the secretariat of which is held by DIN.

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 March 2002, and conflicting national standards shall be withdrawn at the latest by March 2002.

This European Standard is one of a series of standards which specify test methods for determining dimensions and properties of thermal insulating materials and products. It supports a series of product standards for thermal insulating materials and products which derive from the Council Directive of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (Directive 89/106/EEC) through the consideration of the essential requirements.

This standard contains the following normative annex:

Annex A - Spectrophotometric fluoride determination of Fluoride with zirconium-SPADNS

and three informative annexes:

Annex B - General information related to the use of this standard

Annex C - Example of ion chromatography equipment

Annex D - Example of borosilicate glass equipment for preparation of leaching solutions for thermal insulating products that float

This European Standard has been prepared for products used to insulate building equipment and industrial installations, but it may also be applied to products used in other areas.

No existing European Standard is superseded.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies the equipment and procedures for determining trace quantities of the water soluble chloride, fluoride, silicate and sodium ions in an aqueous extract of the product. It also describes a procedure for the determination of the pH of the aqueous extract. The standard is applicable to thermal insulating products.

NOTE The determination of these parameters may be relevant for thermal insulating products intended for application to stainless austenitic steel surfaces. The presence of chloride, fluoride, silicate and sodium ions under certain conditions may influence the risk of stress corrosion cracking. See informative annex B for further information.

2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. The latest edition of this undated reference applies (including amendments).

ISO 10136-1, *Glass and Glassware - Analyses of extract solutions – Part 1: Determination of silicon dioxide by molecular absorption spectrometry.*

ISO 10136-2, *Glass and Glassware - Analyses of extract solutions – Part 2: Determination of sodium oxide and potassium oxide by flame spectrometric methods.*

3 Terms and definitions

This European Standard contains no terms and definitions.

4 Principle

Test specimens of the insulating product are boiled or heated in deionized water to leach out soluble ions. Tests to determine water soluble chloride, fluoride, silicate and sodium ions are performed on aliquots of the filtered aqueous extract. A pH value is determined on one of the aliquots.

5 Apparatus

All equipment and working instruments used for this purpose must be free from soluble chloride, fluoride, silicate, sodium ions, and grease. Chloride free solvents shall be used to clean equipment and working instruments (avoid chlorinated solvents). During the performance of the analytic procedure extraneous sources of these ions shall be reduced or eliminated.

5.1 Preparation of aqueous extract

5.1.1 1000 ml borosilicate glass flask;

5.1.2 Water condenser;

5.1.3 Heater, complying with the requirements of 7.2;

5.1.4 Prewashed filter, diameter of pores 0,45 µm;

5.1.5 Cork borer having a diameter which enables to take the specified mass for the test specimen;

5.1.6 Disposable gloves;