

Unshaped refractory products - Part 8: Determination of complementary properties

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1402-8:2004 sisaldab Euroopa standardi EN 1402-8:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 28.01.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1402-8:2004 consists of the English text of the European standard EN 1402-8:2003.</p> <p>This document is endorsed on 28.01.2004 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 European Standard specifies methods for determination of the properties of unshaped refractory materials from test pieces prepared and stored in accordance with EN 1402-5. The methods complement those described in EN 1402-6. The methods have been adapted from standards for shaped refractory products to make them applicable to dense and insulating castables, and ramming materials as defined in EN 1402-1, before and after firing.</p>	<p>Scope:</p> <p>This European Standard specifies methods for determination of the properties of unshaped refractory materials from test pieces prepared and stored in accordance with EN 1402-5. The methods complement those described in EN 1402-6. The methods have been adapted from standards for shaped refractory products to make them applicable to dense and insulating castables, and ramming materials as defined in EN 1402-1, before and after firing.</p>
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ICS 81.080

Võtmesõnad:

English version

Unshaped refractory products - Part 8: Determination of complementary properties

Produits réfractaires non façonnés - Partie 8:
Détermination des caractéristiques complémentaires

Ungeformte feuerfeste Erzeugnisse - Teil 8: Bestimmung
zusätzlicher Eigenschaften

This European Standard was approved by CEN on 20 June 2003.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

	page
Foreword.....	3
1 Scope	4
2 Normative references	4
3 Principle	4
4 Determination of permeability to gases	5
4.1 Principle	5
4.2 Test-pieces	5
4.3 Procedure	5
5 Determination of the resistance to thermal shock	5
5.1 Principle	5
5.2 Test-pieces	5
5.3 Procedure	5
6 Determination of thermal conductivity	6
6.1 Principle	6
6.2 Test pieces.....	6
6.3 Procedure	6
7 Determination of sulfuric acid resistance	6
7.1 Principle	6
7.2 Test pieces.....	6
7.3 Procedure	6
8 Tests for products containing carbon	7
8.1 Principle	7
8.2 Test-pieces	7
8.3 Procedure	7
8.3.1 Tests before carbonization	7
8.3.2 Tests after carbonization	7
8.3.3 Tests after removal of all carbon.....	7
9 Determination of the resistance to carbon monoxide.....	7
10 Determination of resistance to abrasion at ambient temperature	7
11 Test report	7

Foreword

This document (EN 1402-8:2003) has been prepared by Technical Committee CEN/TC 187 "Refractory products and materials", 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 April 2004, and conflicting national standards shall be withdrawn at the latest by April 2004.

This document supersedes ENV 1402-8:1999.

EN 1402 *Unshaped refractory products* consists of eight parts:

- *Part 1: Introduction and classification*
- *Part 2: Sampling for testing*
- *Part 3: Characterization as received*
- *Part 4: Determination of consistency of castables*
- *Part 5: Preparation and treatment of test pieces*
- *Part 6: Measurement of physical properties*
- *Part 7: Tests on pre-formed shapes*
- *Part 8: Determination of complementary properties*

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies methods for determination of the properties of unshaped refractory materials from test pieces prepared and stored in accordance with EN 1402-5. The methods complement those described in EN 1402-6.

The methods have been adapted from standards for shaped refractory products to make them applicable to dense and insulating castables, and ramming materials as defined in EN 1402-1, before and after firing.

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. For undated references the latest edition of the publication referred to applies (including amendments).

EN 993-3, *Methods of test for dense shaped refractory products - Part 3: Test methods for carbon - containing refractories.*

EN 993-4, *Methods of test for dense shaped refractory products - Part 4: Determination of permeability to gases.*

ENV 993-11:1997, *Dense shaped refractory products - Part 11: Determination of resistance to thermal shock.*

EN 993-14:1998, *Methods of testing dense shaped refractory products - Part 14: Determination of thermal conductivity by the hot wire (cross array) method.*

EN 993-15:1998, *Methods of test for dense shaped refractory products - Part 15: Determination of thermal conductivity by the hot wire (parallel) method.*

EN 993-16, *Dense shaped refractory products - Methods of test - Part 16: Determination of resistance to sulfuric acid.*

prEN 993-20, *Methods of test for dense shaped refractory products - Part 20: Determination of resistance to abrasion at ambient temperature.*

EN 1402-1, *Unshaped refractory products - Part 1: Introduction and classification.*

EN 1402-2, *Unshaped refractory products - Part 2: Sampling for testing.*

EN 1402-3, *Unshaped refractory products - Part 3: Characterization as received.*

EN 1402-5, *Unshaped refractory products - Part 5: Preparation and treatment of test-pieces.*

EN 1402-6, *Unshaped refractory products - Part 6: Measurement of physical properties.*

EN ISO 12676, *Refractory products - Determination of resistance to carbon monoxide (ISO 12676:2000).*

3 Principle

The complimentary properties of unshaped refractory products are determined by the procedures given in EN 993-3, EN 993-4, ENV 993-11, EN 993-14, EN 993-15, EN 993-16, prEN 993-20, EN 1402-1, EN 1402-2, EN 1402-3, EN 1402-5, EN 1402-6 and EN ISO 12676.

The methods complement those described in EN 1402-6. It is not necessary to use all the methods to characterize a material.