# Chimneys - Elastomeric seals and elastomeric sealants - Material requirements and test methods - Part 1: Seals in flue liners

Chimneys - Elastomeric seals and elastomeric sealants - Material requirements and test methods - Part 1: Seals in flue liners

**EESTI STANDARDI EESSÕNA** **NATIONAL FOREWORD**

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| Käesolev Eesti standard EVS-EN 14241-1:2005 sisaldab Euroopa standardi EN 14241-1:2005 ingliskeelset teksti.<br><br>Käesolev dokument on jõustatud 29.09.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.<br><br>Standard on kättesaadav Eesti standardiorganisatsioonist. | This Estonian standard EVS-EN 14241-1:2005 consists of the English text of the European standard EN 14241-1:2005.<br><br>This document is endorsed on 29.09.2005 with the notification being published in the official publication of the Estonian national standardisation organisation.<br><br>The standard is available from Estonian standardisation organisation. |

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|---|---|
| **Käsitlusala:**<br>This European Standard specifies the material requirements and test methods for prefabricated elastomeric seals for use in flue liners. It also specifies the requirements for evaluation of conformity. | **Scope:**<br>This European Standard specifies the material requirements and test methods for prefabricated elastomeric seals for use in flue liners. It also specifies the requirements for evaluation of conformity. |

**ICS** 91.060.40, 91.100.50

**Võtmesõnad:** conformity tests, exhaust manifolds, flues, properties, quality, reinforcement, reinforcement : structures, rubber, sealant, sealants, seals, shape, specification (approval), specifications, stoppers, testing, testing conditions

EUROPEAN STANDARD

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English Version

# Chimneys - Elastomeric seals and elastomeric sealants - Material requirements and test methods - Part 1: Seals in flue liners

Conduits de fumée - Garnitures et matériaux d'étanchéité en élastomère - Exigences de matériaux et méthodes d'essai - Partie 1 : Garnitures d'étanchéité dans les conduits intérieurs

Abgasanlagen - Werkstoffanforderungen und Prüfungen für elastomere Dichtungen und Dichtwerkstoffe - Teil 1: Dichtungen für den Einsatz in Innenrohren

This European Standard was approved by CEN on 27 June 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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## Foreword

This European Standard (EN 14241-1:2005) has been prepared by Technical Committee CEN/TC 166 “Chimneys”, the secretariat of which is held by UNI.

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 February 2006, and conflicting national standards shall be withdrawn at the latest by February 2006.

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

## Introduction

The objective of this European Standard is to evaluate the material behaviour of prefabricated elastomeric seals for application in flue liners.

The testing conditions are representative of normal use, yet severe enough to yield meaningful results in a relatively short period of time.

## 1 Scope

This European Standard specifies the material requirements and test methods for prefabricated elastomeric seals for use in flue liners. It also specifies the requirements for evaluation of conformity.

These seals are components in flue liners of different materials like metal, plastic, clay, concrete etc.

Performance requirements of elastomeric seals in flue liners are covered by the relevant product standards.

In the product standards chimney products, including seals, are tested under operational conditions (e.g. temperature, pressure, mechanical load, flue gas, condensate) to relevant properties such as leakage and deformation.

This European Standard covers seals intended for use in both dry and wet conditions. Therefore all seals are tested for functioning under wet conditions.

This European Standard does not contain all the requirements necessary for chimneys with the following classification:

— corrosion resistance class 2 concerning natural wood, [1)]

— corrosion resistance class 3.

## 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.

EN 1443, *Chimneys – General requirements*

ISO 37, *Rubber, vulcanized or thermoplastic – Determination of tensile stress-strain properties*

ISO 188, *Rubber, vulcanized or thermoplastic – Accelerated ageing and heat resistance tests*

ISO 815, *Rubber, vulcanized or thermoplastic – Determination of compression set at ambient, elevated or low temperatures*

ISO 1431-1, *Rubber, vulcanized or thermoplastic – Resistance to ozone cracking – Part 1: Static and dynamic strain testing*

ISO 1817, *Rubber, vulcanized – Determination of the effect of liquids*

ISO 2781*, Rubber, vulcanized – Determination of density*

ISO 2859-1, *Sampling procedures for inspection by attributes – Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 6914, *Rubber, vulcanized or thermoplastic – Determination of ageing characteristics by measurement of stress relaxation*

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1) There is not sufficient knowledge or data for flue gas condensate from appliances fired with natural wood.

ISO 7619-1, *Rubber, vulcanized or thermoplastic – Determination of indentation hardness*

## 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 1443 and the following apply.

**3.1**
**characterisation** [2)]
identification of the material by determining a combination of properties covering the thermal, mechanical and physicochemical behaviour

**3.2**
**material** [3)]
material composition of which an individual component is made, being the result of a manufacturing process in which the raw material(s) is transformed by extrusion, moulding, welding etc. in its intended shape

**3.3**
**material test** [4)]
test in which specific properties of a material as defined in 3.2 are tested

**3.4**
**external installation**
part of a chimney which is located outside the building. Flue liners installed within an enclosure or cladding are considered as an internal installation

**3.5**
**internal installation**
part of a chimney which is located inside a building

**3.6**
**reaction to fire**
response of a product in contributing by its own decomposition to a fire to which it is exposed, under specified conditions

**3.7**
**seal**
prefabricated device that joins two components in such a way as to prevent leakage

**3.8**
**joint in elastomeric seals**
joint in elastomeric seals is the area where two or more original surfaces of the material are brought together and adhered to each other with the intention to manufacture an endless seal. A joint in elastomeric seals may be made by vulcanization, gluing or any other suitable method

**3.9**
**sealant**
material which, applied in an unformed state to a joint, seals it by adhering to appropriate surfaces within the joint

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2) A fingerprint of the material.

3) Changing the manufacturing process may change the properties of the material.

4) The material test does not include the effects of the performance of the chimney system resulting in stress etc. on the individual components.