Clay roofing tiles for discontinuous laying -**Determination of physical characteristics - Part 2: Test** is a protion sometated by the for frost resistance



#### **EESTI STANDARDI EESSÕNA**

#### **NATIONAL FOREWORD**

	This Estonian standard EVS-EN 539-2:2013 consists of the English text of the European standard EN 539-2:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
	Date of Availability of the European standard is 15.05.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile <a href="mailto:standardiosakond@evs.ee">standardiosakond@evs.ee</a>.

ICS 91.100.25

#### Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega: Aru 10, 10317 Tallinn, Eesti; <a href="www.evs.ee">www.evs.ee</a>; telefon 605 5050; e-post <a href="mailto:info@evs.ee">info@evs.ee</a>

#### The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation: Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

### EUROPEAN STANDARD

EN 539-2

# NORME EUROPÉENNE

**EUROPÄISCHE NORM** 

May 2013

ICS 91.100.25

Supersedes EN 539-2:2006

#### **English Version**

## Clay roofing tiles for discontinuous laying - Determination of physical characteristics - Part 2: Test for frost resistance

Tuiles de terre cuite pour pose en discontinu -Détermination des caractéristiques physiques - Partie 2: Essais de résistance au gel Dachziegel für überdeckende Verlegung - Bestimmung der physikalischen Eigenschaften - Teil 2: Prüfung der Frostwiderstandsfähigkeit

This European Standard was approved by CEN on 14 March 2013.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION COMITÉ EUROPÉEN DE NORMALISATION EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Sor	ntents	Page
ore	eword	3
0.0	Scope	
	Normative references	4
	Terms and definitions	4
	Test pieces	8
	Test method (European single test method)	8
	ex A (normative) Determination of the dry density by hydrostatic weighting	
ibli	iography	18
	Saprotion of the contract of t	

#### **Foreword**

This document (EN 539-2:2013) has been prepared by Technical Committee CEN/TC 128 "Roof covering products for discontinuous laying and products for wall cladding", the secretariat of which is held by IBN.

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 November 2013, and conflicting national standards shall be withdrawn at the latest by November 2013.

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.

This document supersedes EN 539-2:2006.

In comparison to the previous edition, modifications have been made in Clause 1, subclauses 3.1, 3.5, 3.6 and 3.8, Clause 5 and Annex A. The test methods A, B, C and D are withdrawn.

This part of EN 539 is preceded by:

 EN 539-1, Clay roofing tiles for discontinuous laying — Determination of physical characteristics — Part 1: Impermeability test

This part of EN 539 is one of a series of standards concerning clay roofing tiles, the list of which is indicated below:

- EN 1304, Clay roofing tiles and fittings Products definitions and specifications
- EN 538, Clay roofing tiles for discontinuous laying Flexural strength test
- EN 1024, Clay roofing tiles for discontinuous laying Determination of geometric characteristics

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

600

#### 1 Scope

This European Standard specifies the test method for the determination of frost resistance of clay roofing tiles and fittings.

The test method is applicable in all CEN member countries in accordance with the required performance level of each member state.

#### 2 Normative references

Not applicable.

#### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

#### pit

superficial fault consisting of a fraction of material detached from the body of the product on the visible surface of the product with a mean dimension of over 7 mm

Note 1 to entry: This is often due to the expansion of a particle of, for example, chalk or pyrites.

[SOURCE: EN 1304:2013, 3.5.18.2]



Figure 1 — Example of pit

## 3.2 hair crack

superficial crack having a width of not more than 0,20 mm

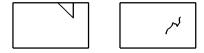


Figure 2 — Example of hair crack