

**Uste, luukide ja avatavate akende ning nende suluste tulepüsivuse ja/või suitsutõkke katsetulemuste kasutusulatuse laiendamine. Osa 10: Terasest ruloouksekomplektide tulepüsivus**

E

10:

-

EVS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

E  
10:2011 E EVS-EN 15269-  
10:2011 EN 15269-  
  
S E S  
1 05 2011  
EVS  
  
E  
E  
20 0 2011  
S E

E EVS-EN 15269-10:2011  
E E  
EN 15269-10:2011 E  
  
E S  
1 05 2011  
E  
  
E  
20 0 2011  
E  
  
E

ICS 1 220 50 91 060 50

Standardite reprodutseerimis- ja levitamisoigus kuulub Eesti Standardikeskusele

E S

10 10 1 E : 605 5050 E- E S :

Right to reproduce and distribute belongs to the Estonian Centre for Standardisation

N E S

10 10 1 E : 605 5050 E- E S :

English Version

**Extended application of test results for fire resistance and/or  
smoke control for door, shutter and openable window  
assemblies including their elements of building hardware - Part  
10: Fire resistance of steel rolling shutter assemblies**

Application élargie des résultats d'essais en matière de  
résistance au feu et/ou d'étanchéité à la fumée des blocs-  
portes, blocs-fermetures et ouvrants de fenêtres, y compris  
leurs éléments de quincaillerie de bâtiment intégrés - Partie  
10: Résistance au feu des rideaux à enroulement en acier

Erweiterter Anwendungsbereich von Prüfergebnissen zur  
Feuerwiderstandsfähigkeit und/oder Rauchdichtigkeit von  
Türen, Toren und Fenstern einschließlich ihrer  
Baubeschläge - Teil 10: Feuerwiderstandsfähigkeit von  
Rolltoren aus Stahl

This European Standard was approved by CEN on 10 March 2011.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

**Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

Page

<b>Foreword</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>6</b>
<b>4 Determination of the field of extended application</b> .....	<b>6</b>
4.1 General .....	6
4.2 Procedure for evaluation .....	6
4.3 Procedure for maximum field of extended application .....	6
4.4 Interpretation of test results .....	7
<b>5 Extended application report</b> .....	<b>7</b>
<b>6 Classification report</b> .....	<b>7</b>
<b>Annex A (normative) Construction parameter variations for insulated and uninsulated steel rolling shutter assemblies</b> .....	<b>8</b>
<b>Annex B (normative) Steel rolling shutter assemblies stress calculation method</b> .....	<b>38</b>
B.1 Calculation principles .....	38
B.2 Calculation of limiting stress .....	38
B.3 Barrel calculations .....	39
B.4 Barrel support bracket calculations .....	40
B.5 Axle calculations .....	42
B.6 Endplate calculations .....	43
B.7 Curtain expansion allowance .....	46
<b>Annex C (informative) Figures related to Annex A &amp; Annex B</b> .....	<b>47</b>
<b>Bibliography</b> .....	<b>67</b>

## Foreword

This document (EN 15269-10:2011) has been prepared by Technical Committee CEN/TC 127 “Fire safety in buildings”, 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 October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of 89/106/EEC.

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

EVS

## Introduction

This document is one of a series of standards listed below and intended to be used for the purpose of producing an extended application report based on the evaluation of one or more fire resistance and/or smoke control tests. These standards may also be used to identify the best selection of test specimens required to cover a wide range of product variations.

The (pr)EN 15269 series currently consists of:

(pr)EN 15269 Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware

Part 1: General requirements

Part 2: Fire resistance of hinged and pivoted steel doorsets

Part 3: Fire resistance of hinged and pivoted timber doorsets and openable timber framed windows

Part 4: Fire resistance of hinged and pivoted glass doorsets

Part 5: Fire resistance of hinged and pivoted metal framed glazed doorsets and openable windows

Part 6: Fire resistance of sliding timber doorsets

Part 7: Fire resistance for steel sliding doorsets

Part 8: Fire resistance of horizontally folding timber doorsets

Part 9: Fire resistance of horizontally folding steel doorsets

Part 10: Fire resistance of steel rolling shutter assemblies

Part 11: Fire resistance of operable fabric curtains

Part 20: Smoke control for hinged and pivoted steel, timber and metal framed glazed doorsets

Before there can be any consideration for extended application the doorset should have been tested in accordance with EN 1634-1 to achieve a test result which could generate a classification in accordance with EN 13501-2 at least equal to the classification subsequently required from extended application considerations.

A review of the doorset construction parameters can indicate that one or more characteristics may be improved by a particular parameter variation. All evaluations should be made on the basis of retaining the fire resistance classifications obtainable from testing to EN 1634-1, including those lower than the test duration. However, this should never lead to an increased classification for any specific fire or smoke performance parameter beyond that achieved during any one test unless specifically identified in the relevant Construction Parameter Variation tables within this series of standards.

The effect on the durability of self closing of the doorsets following an extended application process is not addressed in this series of standards.

## 1 Scope

This Part of prEN 15269, which should be read in conjunction with EN 15269-1, covers the following types of steel rolling shutter assemblies: un-insulated manually operated rolling shutters, un-insulated powered rolling shutters, insulated manually operated rolling shutters and insulated powered rolling shutters.

This document prescribes the methodology for extending the application of test results obtained from test(s) conducted in accordance with EN 1634-1.

Subject to the completion of the appropriate test or tests selected from those identified in Clause 4 the extended application may cover all or some of the following non-exhaustive list:

- Integrity only (E), radiation (EW) or insulated (EI<sub>1</sub> or EI<sub>2</sub>) classifications;
- shutter curtain;
- wall/ceiling fixed elements (frame/suspension system);
- decorative finishes;
- intumescent, smoke, draught or acoustic seals;
- alternative supporting construction(s).

## 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 1363-1:1999, *Fire resistance tests — Part 1: General requirements*

EN 1363-2:1999, *Fire resistance tests — Part 2: Alternative and additional procedures*

EN 1634-1:2008, *Fire resistance and smoke control tests for door, shutter and openable window assemblies and elements of building hardware — Part 1: Fire resistance tests for doors, shutters and openable windows*

EN 1993-1-2, *Eurocode 3: Design of steel structures — Part 1-2: General rules — Structural fire design*

EN 13501-2:2007+A1:2009, *Fire classification of construction products and building elements — Part 2: Classification using data from fire resistance tests, excluding ventilation services*

EN 15269-1:2010, *Extended application of test results for fire resistance and/or smoke control for door, shutter and openable window assemblies, including their elements of building hardware — Part 1: General requirements*

EN ISO 13943:2010, *Fire safety — Vocabulary (ISO 13943:2008)*