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Conveyor belts - Fire simulation flammability testing - Part 2: Large scale fire test CONSOLIDATED TEXT



## **EESTI STANDARDI EESSÕNA**

#### **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 12881-2:2005+A1:2008 sisaldab Euroopa standardi EN 12881-2:2005+A1:2008 ingliskeelset teksti. This Estonian standard EVS-EN 12881-2:2005+A1:2008 consists of the English text of the European standard EN 12881-2:2005+A1:2008.

Standard on kinnitatud Eesti Standardikeskuse 20.06.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

This standard is ratified with the order of Estonian Centre for Standardisation dated 20.06.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 09.04.2008.

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The standard is available from Estonian standardisation organisation.

**ICS** 13.220.40, 53.040.20

Võtmesõnad:

#### Standardite reprodutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

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# **EUROPEAN STANDARD**

## EN 12881-2:2005+A1

# NORME EUROPÉENNE EUROPÄISCHE NORM

April 2008

ICS 13.220.40: 53.040.20

Supersedes EN 12881-2:2005

## **English Version**

## Conveyor belts - Fire simulation flammability testing - Part 2: Large scale fire test

Courroies transporteuses - Essais de simulation d'inflammation - Partie 2: Essai au feu à grande échelle

Fördergurte - Brandtechnische Prüfungen - Teil 2: Brandstreckenprüfung

This European Standard was approved by CEN on 21 March 2005 and includes Amendment 1 approved by CEN on 21 February 2008.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, 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

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## **Foreword**

This document (EN 12881-2:2005+A1:2008) has been prepared by Technical Committee CEN/TC 188 "Conveyor belts", 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 2008, and conflicting national standards shall be withdrawn at the latest by October 2008.

This document supersedes EN 12881-2:2005.

This document includes Amendment 1, approved by CEN on 2008-02-21.

The start and finish of text introduced or altered by amendment is indicated in the text by tags [A].

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).

For relationship with EU Directives, see informative Annexes ZA and ZB, which are integral parts of this document. (A)

The other part of EN 12281 is:

♠ EN 12881-1+A1:2008 ♠ Conveyor belts – Fire simulation flammability testing – Part 1: Propane burner tests

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, 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 the United Kingdom.

## Introduction

The method of test described in this part of EN 12881 is intended to provide an indication of the reaction of a conveyor belt when exposed to a large fire. The fire being simulated is one not caused by a local heat source but by materials around the conveyor belt which catch fire following exposure to other heat sources. Attention is drawn to the fact that in assessing the overall flammability characteristics of conveyor belting for specific rely on. installations, it is not sufficient to rely solely on any single method of test but consideration should also to be given to the individual site location.

## Scope

This part of EN 12881 describes a method of test for the assessment of fire propagation along a conveyor belt when the belt is exposed to a heat source.

#### Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 60584-1, Thermocouples - Part 1: Reference tables (IEC 60584-1:1995)

ISO 3130, Wood – Determination of moisture content for physical and mechanical tests

## **Apparatus**

- 3.1 Fire gallery lined with fire clay bricks having a cross sectional area of 8 m<sup>2</sup> and a length of at least 70 m. The fuel in the fire object area shall be supported by four steel arches 1 m apart (see Figures 1a) and 1b)).
- 3.2 Trestle for positioning the conveyor belt in the fire gallery during the test. The trestle shall be 18 m long and 1,2 m wide having idlers with a pitch of 1,5 m and a troughing angle of 30°.
- 3.3 Fire object comprising a) 260 kg of air-dried coniferous wood in the form of round timber, having a diameter of 8 cm to 12 cm and a length of 1,25 m, cut in the longitudinal direction and having moisture content of (10  $\pm$  2) % measured as described in ISO 3130; and
  - b) 40 kg of smaller wood pieces and wood shavings for ignition

(see Figures 1a) and 1b)).

- 3.4 Anemometer for measuring the air speed in the fire gallery positioned 10 m in front of the test piece in the direction of the air flow.
- 3.5 Row of thermocouples, Type K (Ni-Cr/Ni) according to EN 60584-1, positioned in the longitudinal direction above the test piece, a distance of approximately 3 m from each other and 100 mm under the roof of the fire gallery (see Figures 1a) and 1b)). 1000 OZ 1775

## **Preparation**

## 4.1 Test piece

The test piece shall be cut 18 m long at full belt width.

## 4.2 Temperature before the test

The ambient temperature shall be between 5 °C and 30 °C before the test.

## 4.3 Number of tests

One test shall be carried out.