Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to the combination of UV radiation, elevated temperature and water

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 1297:2004 sisaldab Euroopa standardi EN 1297:2004 ingliskeelset teksti. Käesolev dokument on jõustatud 21.12.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1297:2004 consists of the English text of the European standard EN 1297:2004. This document is endorsed on 21.12.2004 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This document specifies the method for exposure of factory made bitumen or plastic or rubber sheets for roof waterproofing to combined effects of long term exposure by UV radiation, elevated temperature and water as means of artificial ageing.	**Scope:** This document specifies the method for exposure of factory made bitumen or plastic or rubber sheets for roof waterproofing to combined effects of long term exposure by UV radiation, elevated temperature and water as means of artificial ageing.

ICS 91.100.50

Võtmesõnad: aging : materials, aging tests, climatic protect, composite materials, consistency, materials, roofing, rubber, sampling, specifications, ultraviole, water, water proof sheetings, waterproof materials, waterproof properties, waterproofing, waterproofing materials

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Flexible sheets for waterproofing - Bitumen, plastic and rubber sheets for roof waterproofing - Method of artificial ageing by long term exposure to the combination of UV radiation, elevated temperature and water

Feuilles souples d'étanchéité - Feuilles d'étanchéité de toiture bitumineuses, plastiques et élastomères - Méthode de vieillissement artificiel par exposition combinée de longue durée aux rayonnements UV, à la température élevée et à l'eau

Abdichtungsbahnen - Bitumen-, Kunststoff- und Elastomerbahnen für Dachabdichtungen - Verfahren zur künstlichen Alterung bei kombinierter Dauerbeanspruchung durch UV-Strahlung, erhöhte Temperatur und Wasser

This European Standard was approved by CEN on 22 July 2004.

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

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Contents

Foreword

This document (EN 1297:2004) has been prepared by Technical Committee CEN /TC 254, "Flexible sheets for waterproofing", the secretariat of which is held by BSI.

This standard is one of a series of standards, which specify test methods for determining dimensions and characteristics of flexible sheets as factory made products.

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 March 2005, and conflicting national standards shall be withdrawn at the latest by March 2005.

No existing European Standard is superseded.

This document includes a Bibliography.

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

This document has been prepared by CEN/TC 254 ”Flexible sheets for waterproofing” in order to test flexible bitumen, plastic and rubber sheets for roof waterproofing in relation to their ageing resistance to combined effects of long term exposure to UV radiation, elevated temperature and water.

This document defines one common procedure to be applied as a method for artificial ageing to all types of flexible sheets for roof waterproofing

This document has been drafted for applications in roofing but it may also be applied to other areas where it is relevant.

1 Scope

This document specifies the method for exposure of factory made bitumen or plastic or rubber sheets for roof waterproofing to combined effects of long term exposure by UV radiation, elevated temperature and water as means of artificial ageing.

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 13416, *Flexible sheets for waterproofing – Bitumen, plastic and rubber sheets for roof waterproofing – Rules for sampling*

EN ISO 4892-1, *Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance (ISO 4892-1:1999)*

EN ISO 4892-3, *Plastics – Methods of exposure to laboratory light sources – Part 3: Fluorescent UV lamps (ISO 4892-3:1994)*

3 Terms and definitions

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

	Symbol	Unit
3.1 **fluorescent UV lamp** lamp in which primary radiation from a low pressure mercury arc is transformed into higher wavelength UV by means of a fluorescent phosphor. The spectral emission of a fluorescent lamp is determined by the spectral emission of the fluorescent phosphor and the transmission characteristics of the glass tube. A fluorescent UV lamp is a lamp in which the radiant emission in the ultraviolet region of the spectrum < 400 nm makes up at least 80 % of the total radiation output		
3.2 **irradiance** incident radiant flux onto a surface per unit area	E	W / m²
3.3 **spectral irradiance** radiant flux per unit area per wavelength interval	E_λ	W/(m²·nm)
3.4 **Radiant exposure** time integral of irradiance	H	J/m²
3.5 **UV-radiation** radiation with a wavelength λ between: 100 nm < λ < 400 nm	λ	nm