



**NSAI**  
Standards

Irish Standard  
I.S. EN 14836:2006

# Synthetic surfaces for outdoor sports areas - Exposure to artificial weathering

## I.S. EN 14836:2006

*Incorporating amendments/corrigenda issued since publication:*

EN 14836:2005/AC:2007

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

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English version  
Version Française  
Deutsche Fassung

Synthetic surfaces for outdoor sports areas - Exposure to artificial  
weathering

Surfaces synthétiques pour terrains de  
sport en plein air - Méthodes d'essai -  
Vieillesse artificiel

Synthetische Sportböden für den  
Außenbereich - Künstliche Bewitterung

This corrigendum becomes effective on 28 February 2007 for incorporation in the official German and English versions of the EN.

Ce corrigendum prendra effet le 28 février 2007 pour incorporation dans les versions officielles allemande et anglaise de la EN.

Die Berichtigung tritt am 28. Februar 2007 zur Einarbeitung in die offizielle Deutsche und Englische Fassung der EN in Kraft.



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

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Ref. No.: EN 14836:2005/AC:2007 D/E

### English version

Replace the text of "Clause 5 Exposure conditions" by the following:

"The exposure cycle shall comprise  $(240 \pm 4)$  min of dry UV exposure at a black-standard temperature of  $(55 \pm 3)$  °C, followed by  $(120 \pm 2)$  min of condensation exposure, commencing once equilibrium has been attained, without radiation, at a black-standard temperature of  $(45 \pm 3)$  °C."

### Version française

Remplacer le texte de l'Article 5 intitulé « Conditions d'exposition » par le texte suivant:

Le cycle d'exposition doit comprendre  $(240 \pm 4)$  min d'exposition aux UV à sec à une température de  $(55 \pm 3)$  °C mesurée par un thermomètre à panneau noir, suivies, au moment où l'équilibre a été atteint, de  $(120 \pm 3)$  min d'exposition à la condensation, sans rayonnement, à une température  $(45 \pm 3)$  °C mesurée par un thermomètre à panneau noir.

### Deutsche Fassung

Der Text von Abschnitt 5 "Beanspruchungsbedingungen" ist durch den Folgenden zu ersetzen:

"Der Beanspruchungszyklus muss aus einer UV-Bestrahlung im Trocknen mit einer Dauer von  $(240 \pm 4)$  min bei einer Schwarzstandardtemperatur von  $(55 \pm 3)$  °C, gefolgt von einer Kondensationsbeanspruchung mit einer Dauer von  $(120 \pm 2)$  min, die gleich nach Erreichen des Gleichgewichtes beginnt und ohne Bestrahlung sowie bei einer Schwarzstandardtemperatur von  $(45 \pm 3)$  °C erfolgt, bestehen."

ICS 97.220.10

English Version

## Synthetic surfaces for outdoor sports areas - Exposure to artificial weathering

Surfaces synthétiques pour terrains de sport en plein air -  
Méthodes d'essai - Vieillessement artificiel

Synthetische Sportböden für den Außenbereich -  
Künstliche Bewitterung

This European Standard was approved by CEN on 28 November 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 14836:2005) has been prepared by Technical Committee CEN/TC 217 “Surfaces for sports areas”, 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 June 2006, and conflicting national standards shall be withdrawn at the latest by June 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.

## 1 Scope

This European Standard specifies a method for the exposure of synthetic surfaces for outdoor sports areas to artificial weathering in order that the resulting changes in properties can be determined as detailed in the relevant product specification.

## 2 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 ISO 4892-1:2000, *Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance (ISO 4892-1:1999)*

EN ISO 4892-2:1999, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc sources (ISO 4892-2:1994)*

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

## 3 Principle

Specimens are exposed to UV radiation under controlled environmental conditions.

NOTE Fluorescent UV lamps use the emission from a low-pressure mercury arc to excite a phosphor that produces a continuous spectrum in a relatively narrow wavelength interval, which is generally distributed about a peak wavelength. The spectral distribution of the radiation from a fluorescent lamp is determined by the emission spectrum of the phosphor and the UV transmission properties of the glass tube. Fluorescent UV lamps are generally used to expose material to UV radiation in a limited spectral range.

## 4 Apparatus

Artificial weathering cabinet using fluorescent UV lamps and environmental control having the following features.

- a) UV-A 340 nm lamps, in accordance with EN ISO 4892-3 and capable of uniformly applying radiation to the test specimen at an irradiance of 0,80 W/(m<sup>2</sup>/nm) (at 340 nm).

NOTE 1 As many fluorescent lamps age significantly with extended use, the apparatus manufacturer's instructions on the procedure necessary to maintain the desired irradiance should be followed.

NOTE 2 The use of UV-B fluorescent UV lamps or exposure in a xenon arc artificial weathering cabinet is recommended when developing or assessing products intended for installation in environments where high levels of UV exposure might be expected.

- b) Exposure chamber, constructed from inert material and that provides uniform irradiance in accordance with item a) and that includes a means of controlling the temperature.
- c) Wetting mechanism, either condensation or water spray, to wet the exposed face of the specimen. In apparatus designed to wet the exposed faces of the specimens by means of a humidity-condensing mechanism, the water vapour shall be generated by heating water in a container located beneath and extending across the whole area occupied by the specimens. Specimen holders (completely filled with specimens) shall constitute the sidewall of the exposure chamber, so that the backs of the specimens are



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