Ekraanid laseriga töökohtades. Ohutusnõuded ja katsetamine KONSOLIDEERITUD TEKST

Screens for laser working places - Safety requirements and testing CONSOLIDATED TEXT



#### **EESTI STANDARDI EESSÕNA**

#### **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 12254:1999+A2:2008 sisaldab Euroopa standardi EN 12254:1998+A2:2008 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 25.03.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 30.01.2008.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 12254:1999+A2:2008 consists of the English text of the European standard EN 12254:1998+A2:2008.

This standard is ratified with the order of Estonian Centre for Standardisation dated 25.03.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 30.01.2008.

The standard is available from Estonian standardisation organisation.

ICS 13.280, 13.340.20, 31.260

**Võtmesõnad:** accident prevention, instructions, laser products, lasers, marking, operating stations, personal protective equipment, radiation protection, screens (protectors), specifications, tests

Standardite reprodutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

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

## **EUROPEAN STANDARD**

# NORME EUROPÉENNE

## **EUROPÄISCHE NORM**

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EN 12254:1998+A2

ICS 13.280: 13.340.20: 31.260

Supersedes EN 12254:1998

#### **English Version**

# Screens for laser working places - Safety requirements and testing

Ecrans pour postes de travail au laser - Exigences et essais de sécurité

Abschirmungen an Laserarbeitsplätzen -Sicherheitstechnische Anforderungen und Prüfung

This European Standard was approved by CEN on 16 October 1998, includes Amendment 1 approved by CEN on 1 August 2002 and Amendment 2 approved by CEN on 26 December 2007.

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 12254:1998+A2:2008) has been prepared by Technical Committee CEN/TC 85 "Eye protective equipment", the secretariat of which is held by AFNOR.

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 July 2008, and conflicting national standards shall be withdrawn at the latest by July 2008.

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 EU Directive(s).

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

This document supersedes EN 12254:1998.

This document includes Amendment 1, approved by CEN on 2002-08-01 and Amendment 2, approved by CEN on 2007-12-26.

The start and finish of text introduced or altered by amendment is indicated in the text by tags  $\boxed{\mathbb{A}}$   $\boxed{\mathbb{A}}$  and  $\boxed{\mathbb{A}}$   $\boxed{\mathbb{A}}$ .

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.

#### 1 Scope

This standard specifies specific functional requirements and a product labelling system applicable to a range of temporary and permanent passive guards (in the following called screens) for protection against laser radiation. This standard includes test methods for testing functional performance and also the specification of the user documentation to be supplied with the product. The screens are designed to protect the user from uncontrolled emission of direct and/or diffuse radiation for a defined exposure to lasers, based on the necessary functional requirements for any particular application being determined by risk assessment principles.

This standard applies to supervised screens for installations in working places at which laser radiation up to a maximum mean power of 100 W or single pulse energy of 30 J occurs within the spectral range between 180 nm  $(0.18 \ \mu m)$  and  $10^6 \ nm$   $(1000 \ \mu m)$ .

This standard applies to the protection against laser radiation only. This standard does not apply to other hazards including hazards from secondary radiation that can arise during, for example, material processing.

This standard gives guidance on how to select such screens.

The following are not considered to be within the scope of the standard:

- laser enclosures and housings that are supplied as part of the laser product or are supplied to be fitted to a laser system to form a laser product (according to IEC 60 825-1:1998);
- any screen whose protective properties are limited to a restricted range of angles of incidence (e.g. some interference filters)

#### 2 Normative references

This European Standard incorporates by dated or undated reference provisions by other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent revisions to or amendments of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

EN 165:1995, Personal eye-protection - Vocabulary.

EN 166:1995, Personal eye-protection - Specifications.

EN 168:1995, Personal eye-protection - Non-optical test methods.

EN 169:1992, Personal eye-protection - Filters for welding and related techniques - Transmittance requirements and recommended utilisation

EN 1598:1997, Health and safety in welding and allied processes - Transparent welding curtains, strips and screens for arc welding processes

IEC 60825-1:1998, Safety of laser products - Part 1: Equipment classification, requirements and user's guide

IEC 60050-845:1987, International electrotechnical vocabulary - Chapter 845: Lighting

IEC 60 825-4:1997, Safety of laser products - Part 4: Laser guards

ISO 1184:1983, Plastics - Determination of tensile properties of films.