

Personal eye-protection equipment - Filters and eye-protectors against laser radiation (laser eye-protectors)

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 207:2010 sisaldab Euroopa standardi EN 207:2009 ingliskeelset teksti.

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English Version

Personal eye-protection equipment - Filters and eye-protectors
against laser radiation (laser eye-protectors)

Protection individuelle de l'œil - Filtres et protecteurs de
l'œil contre les rayonnements laser (lunettes de protection
laser)

Persönlicher Augenschutz - Filter und Augenschutzgeräte
gegen Laserstrahlung (Laserschutzbrillen)

This European Standard was approved by CEN on 14 November 2009.

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Contents

Page

Foreword.....	4
1 Scope	5
2 Normative references	5
3 Requirements	5
3.1 Spectral transmittance of filters and frames	5
3.2 Luminous transmittance of filters	5
3.3 Resistance of filters and frames to laser radiation	5
3.4 Refractive values of filters and eye-protectors	6
3.5 Quality of material and surface of filters	7
3.5.1 Material and surface defects	7
3.5.2 Diffusion of light	7
3.6 Stability of filters and eye-protectors to ultraviolet radiation and elevated temperature	7
3.6.1 Stability to ultraviolet radiation	7
3.6.2 Stability at elevated temperature	7
3.7 Resistance of filters and frames to ignition by contact with hot surfaces	7
3.8 Field of vision of eye-protectors	7
3.9 Construction of filters and frames	8
3.10 Mechanical strength of eye-protectors.....	8
3.10.1 Basic requirement.....	8
3.10.2 Optional requirements	8
4 Testing	8
4.1 General.....	8
4.2 Spectral transmittance of filters and frames	10
4.3 Luminous transmittance of filters.....	10
4.4 Resistance of filters and frames to laser radiation	10
4.5 Refractive value of filters and eye-protectors	11
4.6 Quality of material and surface of filters	11
4.6.1 Material and surface defects	11
4.6.2 Diffusion of light	11
4.7 Stability to UV radiation and stability to elevated temperature	11
4.7.1 Stability to UV radiation	11
4.7.2 Stability to elevated temperature	11
4.8 Resistance of filters and frames to ignition by contact with hot surfaces	11
4.9 Field of vision of eye-protectors	12
4.10 Determination of the protected range.....	12
4.11 Frames	13
4.12 Mechanical strength	13
5 Information supplied by the manufacturer	13
6 Marking	14
6.1 Eye-protectors.....	14
6.2 Filters	16
Annex A (informative) Principle	17
A.1 Limit values and time base	17
A.2 Beam areas.....	18
A.3 Angle dependence	19
A.4 Example test report	19
Annex B (informative) Recommendations for the use of laser radiation eye-protectors	22
B.1 General.....	22

B.2	Types of lasers	22
B.3	Determination of the scale numbers	23
B.3.1	General	23
B.3.2	Continuous wave laser (D)	23
B.3.3	Pulsed lasers (I, R), pulse duration $\geq 10^{-9}$ s.....	23
B.3.4	Mode coupled lasers (M), pulse duration $< 10^{-9}$ s.....	25
B.4	Time base	25
B.5	Filters in appliances	26
Annex C	(informative) Significant technical changes between this European Standard and the previous edition	27
Annex ZA	(informative) Relationship between this European Standard and the Essential Requirements of EU Directive 89/686/EEC	28
Bibliography		29

Foreword

This document (EN 207:2009) 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 June 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

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 supersedes EN 207:1998.

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 Annex ZA, which is an integral part of this document.

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1 Scope

This European Standard applies to eye-protectors used for protection against accidental exposure to laser radiation as defined in EN 60825-1:2007 in the spectral range 180 nm (0,18 μm) to 1 000 μm . It defines the requirements, test methods and marking. A guide is given in Annex B for the selection and use of laser eye-protectors.

This European Standard does not apply to protectors for intentional exposure to laser radiation.

EN 208 applies for laser adjustment eye-protectors.

NOTE Before selecting eye protection according to this European Standard, a risk assessment should first be undertaken (see Annex B).

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 166:2001, *Personal eye-protection — Specifications*

EN 167:2001, *Personal eye-protection — Optical test methods*

EN 168:2001, *Personal eye-protection — Non-optical test methods*

EN 60825-1:2007, *Safety of laser products — Part 1: Equipment classification and requirements (IEC 60825- 1:2007)*

ISO 11664-1:2007, *Colorimetry — Part 1: CIE standard colorimetric observers*

ISO 11664-2:2007, *Colorimetry — Part 2: CIE standard illuminants*

3 Requirements

3.1 Spectral transmittance of filters and frames

When tested according to 4.2, the maximum spectral transmittance at the wavelength(s) or in the wavelength range(s) of protection shall not exceed the values specified in Table 1 for the applicable scale number.

3.2 Luminous transmittance of filters

When assessed in accordance with 4.3, the luminous transmittance of the filter relative to the D65 standard illuminant (see ISO 11664-2:2007) shall be at least 20 %. However, luminous transmittance lower than 20 % may be accepted provided that the manufacturer supplies information related to the increase of the intensity of illumination at the relevant workplace in accordance with Clause 5.

3.3 Resistance of filters and frames to laser radiation

When tested according to 4.4, the filters and frames shall meet the requirements of 3.1 and shall not lose their protective effect under the influence of laser radiation of the power (E) or energy density (H) as specified in Table 1 and shall not show any induced transmission (reversible bleaching). No splinters shall come away from the side of the filter facing the eye under the influence of the laser radiation. Any melting or other damage