

# ILNAS

Institut luxembourgeois de la normalisation  
de l'accréditation, de la sécurité et qualité  
des produits et services

## ILNAS-EN 172:1994

### Personal eye protection - Sunglare filters for industrial use

Persönlicher Augenschutz -  
Sonnenschutzfilter für den betrieblichen  
Gebrauch

Protection individuelle de l'oeil - Filtres  
de protection solaire pour usage  
industriel

## National Foreword

This European Standard EN 172:1994 was adopted as Luxembourgish Standard ILNAS-EN 172:1994.

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

<https://portail-qualite.public.lu/fr/normes-normalisation/participer-normalisation.html>

### THIS PUBLICATION IS COPYRIGHT PROTECTED

Nothing from this publication may be reproduced or utilized in any form or by any mean - electronic, mechanical, photocopying or any other data carries without prior permission!

ICS 13.340.20

Descriptors: Accident prevention, eyes, radiation protection, solar radiation, sunlight, optical filters, designation, specifications, physical properties, transmittance, tests, labelling

English version

### **Personal eye protection - Sunglare filters for industrial use**

Protection individuelle de l'oeil - Filtres de  
protection solaire pour usage industriel

Persönlicher Augenschutz - Sonnenschutzfilter  
für den betrieblichen Gebrauch

This European Standard was approved by CEN on 1994-12-05. 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.

The European Standards exist 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

## Foreword

This European Standard was prepared by the Technical Committee CEN/TC 85 "Eye-protective equipment" of which the secretariat is held by AFNOR.

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 or EC Directive(s).

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 1995, and conflicting national standards shall be withdrawn at the latest by June 1995.

According to the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

## 1 Scope

This European Standard specifies the scale numbers, transmittances and related requirements for sunglare filters for industrial use. Other valid requirements for these types of filters are specified in prEN 166.

Selection criteria and information on use of these filters are given in Annex A.

This standard does not apply to filters for protection against radiation from artificial light sources such as those used in solaria. EN 170 applies for these filters.

This standard does not apply to ski goggles for which a separate standard is in preparation or for other types used for leisure activities.

A separate standard for sunglasses and sunglare filters for general use is in preparation.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions 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.

- prEN 165 Personal eye protection - Vocabulary
- prEN 166 Personal eye protection - Specifications
- prEN 167 Personal eye protection - Optical test methods
- prEN 168 Personal eye protection - Non-optical test methods
- EN 169 Personal eye protection - Filters for welding and related techniques
- EN 170 Personal eye protection - Ultra-violet filter - Transmittance requirements and recommended use

### 3 Designation and marking

A complete table of filter designation and marking is given in clauses 4 and 9 of prEN 166.

The scale number of a sunglare filter contains the code numbers 5 (filter with no requirement for protection in the infra-red) or 6 (filter with a requirement for protection in the infra-red) and the shade number of the filter (see clause 4 and Annex A.2).

### 4 Requirements

The requirements of prEN 166 apply to sunglare filters for industrial use. Only those requirements that are different from or supplement the prEN 166 specifications are given in the following.

#### 4.1 Permissible transmittance and scale numbers

##### 4.1.1 Filters with code number 5

**Table 1 : Permissible transmittance for filters without a requirement for infra-red protection**

Scale number	Ultraviolet spectral range			Visible spectral range	
	Maximum value of spectral transmittance $\tau(\lambda)$		Maximum mean value of spectral transmittance	Range of luminous transmittance	
	from 280 nm to 315 nm	over 315 nm to 350 nm	from 315 nm to 380 nm	from $\tau_V$ %	to over $\tau_V$ %
5-1,1 <sup>1)</sup>				100	80,0
5-1,4				80,0	58,1
5-1,7	0,1 $\tau_V$	$\tau_V$	$\tau_V$	58,1	43,2
5-2				43,2	29,1
5-2,5				29,1	17,8
5-3,1	0,01 $\tau_V$	0,5 $\tau_V$	0,5 $\tau_V$	17,8	8,0
5-4,1				8,0	3,0

<sup>1)</sup> This scale number only applies to certain photochromic sunglare filters in their clear condition and for the high luminous transmittance range of gradient filters.