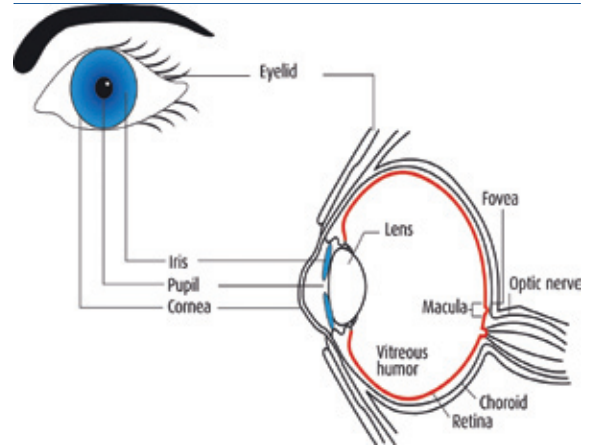


The general standard applicable to protective eyewear is the EN166 standard (Personal eye protection, specifications). It provides, inter alia, for the mandatory marking of the temples and lenses. This standard (together with the EN168) also provides for mechanical equipment resistance tests.

STANDARDS	DESIGNATION
EN165	Personal eye-protection -Vocabulary.
EN166	Personal eye-protection - Specifications.
EN167	Personal eye-protection - Optical test methods
EN168	Personal eye-protection - Non optical test methods.
EN169	Personal eye-protection - Filters for welding and related techniques. Transmittance requirements and recommended utilisation.
EN170	Personal eye-protection - Ultraviolet filters
EN171	Personal eye-protection - Infrared filters –
EN172	Personal eye-protection - Sunglare filters for industrial use.
EN175	Personal protection – Equipment for eye and face protection during welding and allied processes.
EN1836	Personal eye protection - Sunglasses and sunglare filters for general use.



EN166	2001
Optical Class	
Optical class 1 = Continuous work (better quality)	
Optical class 2 = Intermittent work	
Optical class 3 = Occasional work (lower quality)	

Identification symbols for mechanical strength

Symbol	Mechanical strength requirements
No symbol	Minimum robustness
S	Increased robustness
F	Low energy impact
B	Medium energy impact
A	High energy impact

Symbol T is used in conjunction with either F, B or A, to indicate that the eye protector conforms to the high speed particules classifications at extremes of temperature

Symbols for field of use

Symbol	Designation
No symbol	Basic use
3	Liquids
4	Large dust particles
5	Gas and fine dust particles
8	Short circuit electric arc
9	Molten metal and hot solids.





PROTECTIVE EYEWEAR

EN170 SCALE NUMBER 2-1,2 - 2-1,7

Shade colour : clear, blue, yellow or green

Colour perception : May be impaired

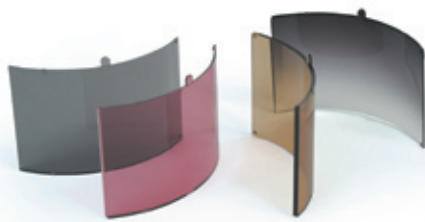
Typical application:

For use with sources which emit predominantly ultra-violet radiation at wavelengths shorter than 313 nm and when glare is not an important factor: this covers the UVC and most of the UVD Bands (b)

Typical sources (a)

Low pressure mercury lamps such as lamps used to stimulate fluorescence or «black lights», mercury lamps, germicidal lamps

- (a) (the example given for typical sources is for general guidance)
- (b) The wavelengths of these bands are recommended by IEC (that is 280 nm to 315 nm for UVB and 100 nm to 280 nm for UVC)



EN172 SCALE NUMBER 5-2

Shade colour : Smoke

Use: Recommended general filter for most uses

Designation (1):

Medium

(1) The designation is not translated literally in various language versions of this standard since the filter 'darkness' will be considered differently according to the intensity of light experience in the countries concerned.)

EN172 SCALE NUMBER 5.3-1

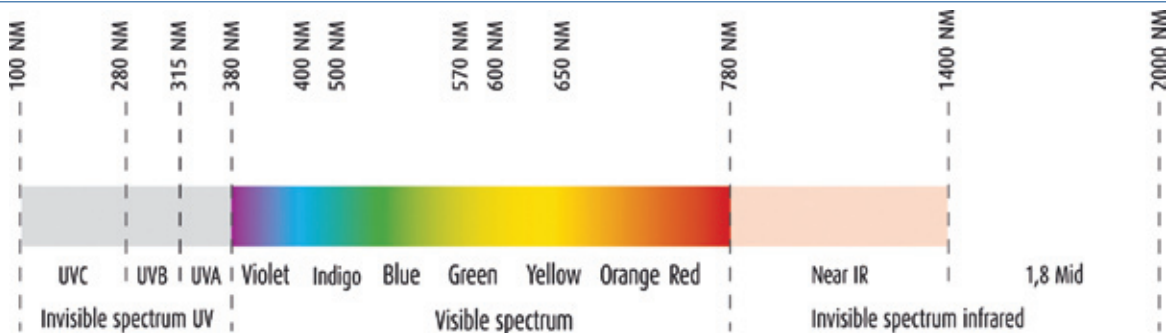
Colour : Smoke

Typical application:

For use in the tropics and sub-tropics, for observation of the sky, for use in high mountain regions, snow covered areas, bright stretches of water, sandy plains, chalk and limestone quarries, not recommended for driving

Designation (1): very dark.

(1) The designation is not translated literally in various language versions of this standard since the filter 'darkness' will be considered differently according to the intensity of light experience in the countries concerned.)



The marking of oculars shall contain the relevant technical information presented as follows:

- * Scale number (filters only) (optional) * Identification of the manufacturer. * Optical class
- * Symbol for mechanical strength (where applicable) * Symbol for resistance to short circuit electrical arc (where applicable)
- * Symbol for non-adherence of molten metal and resistance to penetration of hot solids (where applicable)
- * Symbol for resistance to surface damage by fine particles (where applicable) (symbol K)
- * Symbol for resistance to fogging (where applicable) (symbol N) * Symbol for enhanced reflectance (where applicable) (symbol R)
- * Symbol for original or replacement ocular (optional) (symbols O or)
- * In addition the ocular marking may include a certification mark and a mark to assist correct fitting of laminated oculars.

The marking of frames shall contain the relevant technical information presented as follows:

- * Identification of the manufacturer * The number of this standard (EN166)
- * Field(s) of use (optional) (depending of the model)
- * Symbol for increased robustness/resistance to high speed particles/ Extremes of temperature (where applicable)
- * Symbol indicating that the eye protector is designed to fit a small head (where applicable) (symbol H) * Highest ocular scale number(s) compatible with the frame (where applicable)
- * In addition the frame marking may include a certification mark