

ZEISS SAFETY EYEWEAR

Safety Spectacles User's information

Before using the Safety Spectacles please take notice of the following:

1. Field of application

The safety spectacles equipped with safety lenses are suitable as protection against increased robustness (S-class) or mechanical impact (F-class). If the markings S and F do not apply to both the lens and frame, the lowest level (S-class) is valid for the complete protective Safety Eyewear package. If equipped with safety lenses, they can be used as protection against flying splinters for example from grinding-machines and when removing sharp edges, dross edges and clinkers. The spectacles must be used only in accordance with the risks mentioned above. They are not suitable as protection against heavier mechanical influence or against laser beams. They must not be used as protection against heavy dust, fluids and gases or when using an electrical welder.

Sunglare safety spectacles for industrial use (EN172) as per EN166 standard are to protect the human eye against excessive solar radiation and to reduce eye strain and increase visual perception. To eliminate or reduce reflections from light sources which may have a considerable disturbing effect, an anti-reflective coating is recommended. **Warning!** Please note, the sunglare safety spectacles do not apply for protection against Infra-red protection or radiation from artificial light sources such as in solaria. **Warning!** The sunglare safety spectacles are not suitable for direct observation of the sun (e.g during eclipses or when welding) **Warning!** The sunglare safety spectacles (photochromic) are not suitable for use in twilight or at night. The following table shows the different fields of application:

Sign EN 166	Notification	Description of the field of application
Non	Basic use	None specified mechanical risks, damage through ultraviolet, visual and infrared radiation including Sun radiation.
3	Fluids	Fluids and spitting fluids.
4	Heavy dust	Dust with the granularity of >5µm.
5	Gases and fine dust	Gases, steam, fog, smoke and dust with the granularity of < 5µm.
8	Interference light beam	Electrical light beam that appears when an electrical installation have been short-circuit.
9	Melted metal and heated solid bodies	Drops of metal and penetration of heated solid bodies.

Sunglare safety spectacles for industrial use (EN172) as per EN166 standard are to protect the human eye against excessive solar radiation and to reduce eye strain, and increase visual perception.

5-1.1>2 Medium designation, recommended general filter for most uses.
Applies for the following ZEISS photochromic and CR39 lenses;
Polycarbonate – index 1.59; HMC+ coating; Brown color
CR39 – index 1.5; HMC+ coating; Brown color, HC coating; Brown color

5-1.1>2.5 Dark designation; applies for the following ZEISS photochromic and CR39 lenses;
Polycarbonate – index 1.59; HMC+ coating; Grey color HC coating; Grey color
CR39 – index 1.5; HMC+ coating; Grey color HC coating; Grey color

The safety eyewear protection model is identified by frame name, S- or F-class, EN166 on the temple of the frame

2. Mechanical influenced application

Equipped with safety lenses the safety spectacles can be used as protectors against flying splinters. Typical fields of application are when working with lathes, grinders and drilling machines but also working with angel-grinding machines and chiseling-work.

3. Storing, use and maintenance

Each eye protector should be stored after use in a clean dedicated environment away from heat and moisture. Storage temperature = 0°C - 40°C. Relative humidity = 30% - 80%.

Before every usage, make sure that the frame and the safety lenses have not been damaged. Scratched or damaged oculars should be replaced ensuring that instructions for fitting which accompany replacements parts, are adhered to. The protective safety eyewear should always be put back in the eyewear case when not in use.

4. Cleaning and Disinfection

Each eye protector should be cleaned using a mild detergent or a suitable lens cleaner. The eye protector may be sterilized. Using a mild solution of disinfectant.

These materials will not affect the user nor affect the eye protector.

Warning! Do not use solvent for the cleaning of the eye protector.

Warning! Please be aware that some materials which come into contact with the skin may cause allergic reactions to susceptible individuals.

5. Ageing and obsolescence

The recommendation is that the complete protective safety eyewear package is controlled approximately 2 years after delivery (start of use). Depending on how the safety spectacles are being used, a higher frequency of control could be of recommendation. If the safety spectacles are subjected to conditions or impact it could compromise the ongoing performance to meet the requirements of the standard. It is the responsibility of the employer to confirm that no bigger changes have occurred. It is the responsibility of the employer to assure that the employee has the right protection for the right working environment and that this protection works.

Warning! Scratched or damaged oculars should be replaced. If replacement of lenses is needed in the protective safety eyewear, this could only be executed with new safety lenses by Carl Zeiss Vision AB in Malmö, Sweden who is responsible for the complete protective Safety Eyewear package.

6. Measures of control

Before every usage, make sure that the frame and the safety lenses have not been damaged or scratched causing deteriorated vision. If so, the lenses must be replaced with new identical lenses equally marked with the CE sign. If the frame has been damaged the safety spectacles are not to be used anymore.

7. Meaning of the Markings

Both the frame and the safety lenses must carry the signs below to be used as safety spectacles Under these regulations. The signs of the safety lenses are;

Scale	Material	Index	Coating	Color
5-1.1<2	CR39	1.5	HC	Brown
5-1.1<2.5	CR39	1.5	HC	Grey
5-1.1<2	CR39	1.5	HMC+	Brown
5-1.1<2.5	CR39	1.5	HMC+	Grey
5-1.1<2.5	PC	1.59	HC	Grey
5-1.1<2	PC	1.59	HMC+	Brown
5-1.1<2.5	PC	1.59	HMC+	Grey

Photochromic lenses EN172

5-1.1<2
5-1.1<2.5

Opt 1 S/F CE

Characteristics sign of manufacturer

Optical Class

Class	Sf(dp̄tr)	Ast(dp̄tr)	Prism(cm/m)
1	+/-0,06	0,06	0,25
2	+/-0,12	0,12	0,25
3	+0,12 -0,25	0,25	0,25

Mechanical impact resistance

Signs	Kind fo mechanical impact resistance
S	increased robustness (12 m/s)
F	low energy impact (45 m/s)

CE sign

Warning! Optical class 3 oculars are not intended for long term use.

Signs at the safety frame:

Characteristics signs of the manufacturer OPT 166 F CE

Number of the standard

Mechanical impact resistance

CE sign

If protection against high speed particles is required at extreme temperatures, then the eye protector should be marked with the letter 'T' immediately after the impact letter, for example; EN-166-FT. If the letter T does not follow the impact letter then the eye protector can only be used against high speed particles at room temperature. **Warning!** If the symbols S and F are not matching on both the lens and the frame, it is the lower level which is valid for the complete Safety Eyewear (S-class).

8. Signs of certificates and control:

The products from our company stated in these user information have been construction tested by:

8.1 Certified safety-Frame Classic models are: Q2 and Diamant ■ INSPEC International B.V., Beechavenue 54, 1119 PW, Schiphol-Rijk, Netherlands. ■ Notified body 2849

8.2 Certified safety-frame models: Honeywell and Bollé RX Safety frames. See 8.3 list of Frames Models. INSPEC International B.V., Beechavenue 54, 1119 PW, Schiphol-Rijk, Netherlands. The products have been subjected to quality controls. These products are therefore allowed to have the following sign. The European standardization sign in correspondence with the terms according to Regulation (EU) 2016/425 Module B. ■ Notified body 2849.

8.3 List of Honeywell and Bolle Safety-Frame Models Certified by INSPEC International B.V., Beechavenue 54, 1119 PW, Schiphol-Rijk, Netherlands.

8.3.1 Bolle-Safety Frame Models; B707S, B707L, B708S, B708L, B709S, B709L, B805, Premium, B808BS II, B808RS II, B808BL II, B808RL II, Slide, BOSSN, Twister, MACN(Macro), BAXN(Baxter), Spicy, B713S, B713L

8.3.2 Honeywell Safety-Frame models: Horizon, SW06E, SW07, SW12, EXT10, FC705, FC707.

8.4 Carl Zeiss Vision AB is responsible supplier of the complete protective safety eyewear package even for the safety frame models with identifications from manufacturer Bollé and Honeywell (please see 8.3.1 and 8.3.2

8.5 Relevant harmonized standards. Please see 8.5.1, 8.5.2, 8.5.3. **8.5.1** Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment. **8.5.2** European Standard EN166:2001 for personal eye-protection. **8.5.3** Regulation 2017/745 on Medical Devices. **8.5.4** For access to Declaration of Conformity, please visit: www.zeiss.com/safetyeyewear. **8.5.5** CE marking on lens and frames visible (please see picture to the right).

For User information and Declaration of Conformity in local language, please visit:

www.zeiss.com/safetyeyewear.

Responsible for the complete protective Safety Eyewear package:

Carl Zeiss Vision AB, Box 15035, SE-200 31 Malmö.

Phone +46 40 685 60 00. Fax +46 40 94 18 54

www.zeiss.com/safetyeyewear

