

SPECSAVERS CORPORATE EYECARE

Guide to Safety Eyewear



Specsavers

GUIDE TO SAFETY EYEWEAR

The eyes and eyesight are particularly vulnerable to hazards in the workplace. Each different working environment presents its own unique risks and requirements, so the starting point for any provision of safety eyewear must be a thorough health and safety audit and risk assessment. The Management of Health and Safety at Work Regulations require employers to identify and assess workplace risk to health and safety and to establish the necessary safeguards for employees.

Legal requirements

The provision of safety eyewear for certain employees dates back as far as the 1937 Factories Act. Updates made in 1974 covered 35 specific processes for which approved eye protection was required.

On 1 January 1993, in line with a European Directive, the UK Government introduced new legislation on Health and Safety at Work. The performance standards for personal protective equipment (PPE) relating to eye protection are now taken as the European Norms, more commonly known as the EN standard:

These are:

- EN 165 Personal eye protection: Vocabulary
- EN 166 Personal eye protection: Specifications
- EN 167 Personal eye protection: Optical test methods

- EN 168 Personal eye protection: Non-optical test methods
- EN 169 Personal eye protection: Filters for welding and related techniques: Transmittance requirements and recommended use
- EN 170 Personal eye protection: Ultraviolet filters: Transmittance requirements and recommended use
- EN 171 Personal eye protection: Infrared filters: Transmittance requirements and recommended use
- EN 172 Sunglare eye protectors for industrial use
- EN 207 Filters and eye protectors against laser radiation
- EN 208 Eye protectors for adjustment work on lasers and laser systems
- EN 379 Welding filters with transmittance variable by time and zone

Impact resistance

The overall purpose of safety eyewear is to resist impact. These impacts may, of course, be of varying levels but also from hugely varying objects and substances. Safety eyewear issued in the UK must conform to the European standard EN166:2002. Within this standard are various different levels of impact resistance.

Each lens will be marked with the appropriate symbol regarding its properties:

Symbol	Property
S	Increased robustness
F	Low energy impact
B	Medium energy impact
A	High energy impact
9	Non-adherence of molten metal and resistance to penetration of hot solids
K	Resistance to damage by fine particles
N	Non-fogging properties

Prescription safety glasses will not suffice once the energy impact resistance required reaches 'medium' (denoted as EN166 B), or if work involves the need for protection against corrosive materials, electrical arcs or welding materials. At this point, goggles or visors carrying the appropriate EN specifications will need to be sourced. For high-energy impacts, visors or face shields will be required (as defined by EN166 A).

In some low-energy impact situations (EN 166 F), safety spectacles or glasses are acceptable. This level is required to resist a 6mm, 0.86g ball, travelling at 45 meters per second.

Impact resistance

Specsavers Corporate Eyecare has recently run comprehensive research into the safety eyewear knowledge, policies and choices of more than 100

companies. The results uncover a worrying lack of understanding regarding safety eyewear and misconceptions that could put employees at risk and incur unwarranted costs for employers.

A disturbing 59% of those responsible for health and safety within their company believe that wearing ordinary prescription glasses will provide protection from corrosive materials. Some 31% believe that standard glasses protect from electric arcs and 25% believe they provide protection from welding materials. In fact, wearing ordinary prescription glasses will not provide protection against any of these risks. If ordinary prescription eyewear is used instead of the appropriate safety eyewear, then employees are potentially put at serious risk.

Indeed the lack of knowledge regarding safety eyewear is evident from the very start of the process - when the need for safety frames is first ascertained.

- The most likely stage for a company to agree to provision of safety eyewear is following a request from an employee - stated by 46% of respondents.
- 11% of health and safety managers believe they should provide safety eyewear following advice from a high-street optician.

In practice this should actually be instigated by a full Health & Safety Audit and Risk Assessment. Each situation will have its own specific solution, which can only be truly assessed by someone with access to the workplace. The high street optician will not, therefore, be the appropriate person to determine the risks and propose the precautions. The person responsible for the health and safety audit will need to assess whether the hazards warrant a plastic, glass or polycarbonate lens, whether a tinted lens is appropriate or to be avoided, and whether any other coatings should be included in the requirement. These decisions can only be made with detailed knowledge of the specific risks.

The right level of protection

Usually safety glasses will include side shields to offer lateral protection but these should be selected so as not to unnecessarily restrict the field of view. For circumstances where protection is required for more than just the eyes, full-face protection is often appropriate. Misting is a common complaint of such PPE, but this problem can be eliminated by the use of respiratory equipment.

Over-goggles or eye shields may be appropriate for glasses wearers in some working environments. These are not suitable, however, for long-term or regular usage as they offer less comfort than prescription safety frames. The obvious physical discomfort of wearing two sets of eyewear is one issue but the light refraction

caused by two sets of lenses can also make this an unacceptable solution. It is also important to provide appropriate safety eyewear to guests and visitors, no matter how brief their time spent in the environment.

Frame options

It is possible to procure frames made from either metal or plastic. Metal frames are most commonly nickel alloy, while polyamide, polycarbonate and cellulose acetate tend to be used to manufacture plastic frames.

Although the functionality of safety frames rightly limits the styling to some degree, it is still possible for frames to come in a wide range of male, female and unisex styles in varying colours and finishes. Industry specific considerations will also influence the decision over frame type and style. For example, only plastic frames are suitable for food preparation areas.

Lens selection

Those who regularly need to wear safety eyewear and have a prescription requirement should be provided with safety glasses of the type they most commonly wear. Safety eyewear should not be seen as a good opportunity for a wearer of bifocals to suddenly experiment with varifocals. Equally, it would be irresponsible for an employer to only fund the provision of single vision glasses for an employee who regularly wears multi-focals.

Comfort is an important factor, particularly for anyone who has to wear safety eyewear for long periods of time. Typically, polycarbonate lenses offer the greatest impact resistance combined with the lowest weight.

Our research again shows that wearers may not be receiving the most appropriate kind of safety eyewear. Although 95% of health and safety managers knew that safety glasses can include prescription lenses, 28% did not know they can include varifocal lenses, 24% did not know they can include bifocal lenses and 12% were not aware they could include sun glare protection. So employees are missing out by not being given the full benefits of their safety eyewear.

Style and fit are more important than would perhaps be expected. One fifth do not class comfort as 'very important' when evaluating the use of safety frames, even though 83% of health and safety managers believe that if safety frames are not comfortable they are likely to be removed.

It seems that although safety frames are essentially functional, style is still a significant consideration, with only 19% of respondents saying style is not very important or not important at all. Employers are not legally required to

provide an eyetest for employees prior to selecting safety glasses. It is wise, however, to at least ensure that the wearer's prescription is up to date; otherwise the safety glasses will have a shortened shelf life if an eye test follows shortly and reveals the need for a new prescription.

For ordinary spectacles, taking advantage of upgrade offers from the optician can make lenses and frames very cost-effective. While everyday glasses and those for use with visual display units (VDUs) can be upgraded with reactions lenses, varifocals, etc; no reputable optician will offer upgrades on safety lenses. This is because the optician cannot know every single action and environment in which the safety glasses will be used and it would not be safe to base changes to specifications on assumptions.

Maintenance

While much of the obligation lies with the employer, the wearer also has a responsibility to actually wear the safety glasses provided and do so in the correct manner. For example, side shields are an integral part of the protection offered by safety glasses and must never be removed. Health and safety managers who select glasses with riveted side shields, as opposed to those that screw in or clip on, will find that staff are significantly less likely to succumb to this temptation.

Employers must not allow broken or damaged safety glasses to be repaired on site. They must be returned, usually via the supplying optician's practice, to the EN166-licensed manufacturers who can repair or replace the frames.

Cleaning and disinfecting polycarbonate lenses should be done with great care. This type of lens in particular can have a dramatic reaction to solvents such as acetone or methyl chloride.

Avoiding extremes of heat and humidity will help to preserve the life of safety glasses. The simplest step of all – replacing them in their protective casing while not being used – will keep scratches to a minimum.

No matter how carefully they are looked after, lenses should be replaced at least every three years and frames within five years. This means that a typical eye test cycle of two years provides a suitable interval for most users to receive a new pair of glasses.

Lack of knowledge of maintenance of safety eyewear could be putting staff at risk and incurring unnecessary costs for employers: 8% of respondents to our research believed that the typical lifespan of safety glasses is three years or more. This could be putting wearers at risk. On the other side of the issue, 39% of companies stated that safety glasses

have a typical lifespan of just one year, so they may be incurring unnecessary costs by changing safety eyewear more regularly than required.

Procurement

There are four main stages in the provision of prescription safety eyewear:

- 1 The manufacture and supply of certified safety frames
- 2 The eye test to determine the correct prescription
- 3 The insertion of the appropriate lenses (glazing) in a certified laboratory
- 4 The fitting and dispensing of the spectacles to the wearer

A different supplier can be selected for each of these stages or, a single source can provide the full service. As a result, there are a number of different ways to purchase safety eyewear:

- From a safety frame manufacturer
Many manufacturers of safety frames have regional sales representatives who will set up accounts directly with a company. Pricing is often dependent on volume. The cost of glazing should be included but the optician providing the dispensing service will apply additional, variable, dispensing fees.

- Through a PPE catalogue
PPE catalogues will often offer a range of plain and prescription safety eyewear. Any discounts will be dependant on volumes. Again, while the cost of glazing should be included, the optician who is providing the dispensing service will apply varying additional fees.
- Through a third party network co-ordinator
This is a way of procuring safety glasses from a single manufacturer at a fixed price, usually inclusive of dispensing fees, through a range of opticians.
- Through an arrangement with an optician
The costs incurred will depend on the optician's level of involvement in the process. At one extreme, the optician will source the frames individually from the manufacturer and send them to a certified safety eyewear laboratory for glazing, before dispensing.

At the other end of the spectrum, the optician may have their own range of frames and their own certified glazing facility. The safety eyewear is made in-house from the beginning to the very end of the process. This allows for a greatly reduced cost, inclusive of all fees and glazing, but also for a consistently high level of service and quality. Very few high-street opticians offer this comprehensive service and those that do are valued highly by health and safety managers.

The importance of safety frames being comfortable for the wearer should not be underestimated. Good fit and comfort may often be the deciding factor in a worker actually wearing their safety frames. Finding an optician that has the full range of safety glasses in store and will allow the customer to try them on is a very good first step. When it comes to deciding upon the best style, there is no substitute for actually holding and wearing the glasses being considered. An optician should be chosen that can offer a good range of options and, also ensure that style, comfort and fit are all optimised for purpose.

Ultimately, the health and safety manager must choose the company with which he or she feels most comfortable, where a rapport has been built with individuals who are clearly experts in their field.

Administration

When the purchasing route is selected, it is important to also consider the administration process. Given that safety glasses need to be replaced at regular intervals, that prescriptions and requirements will frequently change and that staff may come and go, it is essential to ensure that the administration processes are as simple and straightforward as possible. It is also important that pricing structures are transparent and consistent and that the provider takes full responsibility for the quality of the safety glasses, offering a full end-to-end customer service.

Wider benefits

Specsavers has now successfully completed the installation of millions of pounds worth of life-saving digital retinal cameras (also known as fundus cameras) across its network of UK stores.

The cameras allow Specsavers Corporate Eyecare to provide a digital retinal screening service to all appropriate clients. Retinal screening with a fundus camera is an integral part of health and wellbeing, with the emphasis on preventative care.

Now being used routinely by Specsavers Corporate Eyecare in full eye examinations for the over 40s, including for VDU and safety eyewear, the fundus technology allows the optometrist to detect and monitor the following illnesses and health conditions:

- diabetes
- various heart conditions
- cancers of the eye, such as melanomas
- brain tumours
- high cholesterol
- detached retina
- hypertension (high blood pressure)
- glaucoma

With, for example, 2.6 million people in the UK diagnosed with diabetes and more than 500,000 people unknowingly having the condition, this screening is a vital part of health and wellbeing. Detecting such conditions with a fundus camera is inexpensive but could save businesses millions in absenteeism and long-term sick leave.

The rewards

Selecting the correct and most suitable safety eyewear can at first seem a potentially complicated and daunting process. If each area is, however, addressed systematically, the workplace risks to employees' eyesight can be satisfactorily overcome both simply and cost effectively.

An individual's eyesight is one of the most precious gifts and both employees and employers alike must work to protect it. It is a sad fact that damage to the eyes is extremely difficult to put right once an accident has occurred. The only sensible option is for health and safety managers to take as much guidance as possible, to gain as much knowledge as possible and to conform to the very highest standards of safety.

Case study - Barr Industrial, Environmental and Manufacturing

Specsavers Corporate Eyecare has an agreement in place to provide eyecare for Barr Industrial, Environmental and Manufacturing. Specsavers Corporate Eyecare is providing safety eyewear to relevant personnel and Premium Club vouchers to all 370 staff employed within these three major divisions of Barr Ltd.

Established in the late 19th Century and one of the UK's leading contractors, Barr takes health and safety extremely seriously and regularly, actively communicates the issues to staff. Barr has selected Specsavers Corporate Eyecare as its provider of safety eyewear because it is well aware of the benefits of experienced optometrists with expertise in prescribing high-quality safety glasses.

Specsavers Corporate Eyecare not only prescribes safety eyewear to suit the specific needs of each individual user, opticians also personally fit the glasses to ensure that eyewear is comfortable and fit for purpose.

Case study - Scottish Prison Service

Specsavers Corporate Eyecare has been awarded the contract to supply the Scottish Prison Service (SPS) with an optical provision for staff. The package comprises of eye examinations, visual display unit spectacles if required, and prescription safety glasses. Specsavers Corporate Eyecare has also agreed to visit each SPS site to further communicate the benefits of their service and to promote health and wellbeing to employees.

SPS is utilising Specsavers Corporate Eyecare's voucher system. This coupled with an online appointment-booking service has ensured the whole eyecare process is extremely quick and simple for SPS staff to use.

For public sector organisations, transparency is particularly important. Specsavers Corporate Eyecare is able to supply SPS with data management reports on a quarterly basis. These highlight service usage and help organisations to see how many people are benefiting from the provision and in which ways.'

It is vital for Specsavers Corporate Eyecare to be able to deliver an optical service of the very highest quality. All staff at SPS are provided with a feedback form regarding their eye examination. This allows for continual improvement of working practices and feedback from both the management and employees at SPS has been very positive.

The stringent tendering processes set by SPS means that they work very closely with their suppliers. This is a big advantage when it comes to implementing problem-solving solutions and putting forward new ideas.

Note: This is not a legal document and is provided for information only. Readers should refer to your Health and Safety Executive for official guidance.

