

3 *Eye & Face Protection*





Why do you need to protect your eyes?

Eye injuries, whatever the source, can result in anything from simple irritation to total blindness.

MECHANICAL HAZARDS Examples: impact, solid particles

THERMAL HAZARDS Examples: hot liquids splash, flame

RADIATION HAZARDS Examples: ultraviolet, infrared, visible light, laser

ELECTRICAL HAZARDS Examples: direct contact, short-circuit electric arc

CHEMICAL OR BIOLOGICAL HAZARDS Examples: acids, solvents, alkalis, splash, infected blood



World leader in safety and personal protective equipment **3M** **PELTOR**™

Eyewear

Our range of eyewear gives you a variety of modern and stylish products to choose from. All safety spectacles and goggles protect the eyes from a wide range of hazards and are available with a selection of coatings, lens types and accessories.

Comfort

Many of our products come with adjustable features and soft materials at points of contact in order to improve fit and comfort to accommodate different face sizes and shapes.

Compatibility

Eye protection often needs to be worn in conjunction with other protective equipment and it is essential that comfort and fit with other PPE (Personal Protective Equipment) is maintained. Much of our eyewear range can be used in combination with same manufacturer's respiratory and hearing protection. Compatibility with other PPE will be subject to a number of variable factors which requires the employer end user to conduct an appropriate selection depending on individual needs.

Guide to choosing eyewear by hazard or application

This guide is an outline only and should not be used as the only means of selecting eye protection.

Choice of product by hazard

RISK	SPECTACLES	GOGGLES
Optical radiation (e.g. UV, IR)	•	•
High speed particle at Low energy (F)	•	•
Medium energy (B)		•
Liquid droplets		•
Large dust particles		•
Gas and fine dust particles		•
Molten metal and hot solids		•
High speed particle at extreme temperature (T)	•	•

Choice of product by application

APPLICATION	SPECTACLES	GOGGLES
Visitors	•	
Grinding		•
Turning	•	•
Assembling	•	•
Cold Metal Working	•	•
Hot Metal Working		•
Painting		•
Laboratory - Acids		•
Laboratory - Dust		•
Laboratory - Hospital		•
Outdoor	•	
Chemical splash		•
Chemical gas		• (non vented)



The Standard: *EN 166* is the standard to which all eye protection should be manufactured and within this standard there are a number of considerations shown as markings on the equipment and on the instructions for use leaflet supplied with your eye protection, they include: **Optical Class**, **Mechanical Strength**, **Field of Use** and **Optional Requirements**

All about the markings

EN 166	FRAME	LENS
Optical Class		
refractive tolerance + 0.06 dio		1
refractive tolerance + 0.12 dio		2
refractive tolerance + 0.12/-0.25 dio		3
Mechanical Strength		
increased robustness		S
low energy impact (45m/s)	F	F
medium energy impact (120m/s)	B	B
high energy impact (190m/s)	A	A
Field of Use		
liquids (chemical)	3	
large dust particles	4	
gas/fine dust particles	5	
short circuit electric arc	8	
molten metals/hot solids	9	9
Optional Requirements		
resistance to misting		N
resistance to scratching		K

Example of lens marking according to EN 166

2-1,2	scale number of filters (optional)	
W	manufacturer's identification code	
1	symbol of optical class	optical class 1 = best class optical class 2 = medium quality optical class 3* = low quality *not for continuous use
F	symbol of mechanical strength (optional)	no symbol - minimum robustness S - increased robustness F - low energy impact (45 m/s) B - medium energy impact (120 m/s) A - high energy impact (190 m/s)
9	symbol of non adherence of molten metal and resistance to penetration of hot solids (optional)	
K	symbol of resistance to surface damage by fine particles (optional)	
N	symbol of resistance to fogging (optional)	
CE	symbol of conformity to CE directive 89/686 EEC	

Example of frame marking according to EN 166

W	166	34	B	DIN	CE	D196
manufacturer's identification code	number of EN standard	field(s) of use (optional)	symbol of resistance to high speed particles (optional)	DIN-tested sign (optional)	symbol of conformity to EC directive 89/686 EEC	certification mark, number of certified body
		no symbol - basic use 3 - liquids 4 - large dust particles 5 - gas and fine dust particles 8 - short circuit electric arc 9 - molten metals and hot solids	no symbol - increased robustness F - low energy impact (49 m/s) B - medium energy impact (120 m/s) A - high energy impact (190 m/s)			



3M 2720 Clear Anti-Scratch Anti-Fog Spectacle code: AE2720

features:

- Comfortable and lightweight spectacles in a sporty design
- Slim nose bridge and flat temple guards for improved compatibility with other equipment such as a safety helmet
- Anti-scratch and anti-fog lenses
- Conforms to EN 166.1.F



3M 71501-00002M Tora Spectacle with Cord code: AE096

features:

- 9D base curved lens offers excellent peripheral vision and perfect lateral side protection (Optical Class 1)
- Extremely lightweight and comfortable at only 22g
- Bronze frame and bronze lens
- Contemporary smart look
- Conforms to EN 166.1.F



3M 04-0072-1040 SX Clear Lens Spectacle code: AE042

features:

- The 3M SX incorporates a wrap around design with a clip on nose bridge for adjustability
- Comes with adjustable temple length and pivots for improved fit
- Conforms to EN 166.1.F



3M 71501-00001CP Tora Spectacle with Cord code: AE094

features:

- Lenses and temples in combined colours intensify the contemporary smart look
- The curved lens offers excellent peripheral vision and perfect lateral side protection
- Conforms to EN 166.1.F



3M QX3000 Grey Black Frame Spectacle code: AE036

features:

- The 3M™ QX™ 3000 spectacle is the most sophisticated in the 3M™ QX series, thanks to its flexible reversible nosepiece and the 'strap' system which holds the eyewear onto the head using a comfortable head strap
- Conforms to EN 166.1.F



3M 4800 Series Goggle

code: AE4800

features:

- The 3M 4800 is a good all round goggle that provides protection against liquid splash and dust
- Conforms to EN 166.1.B



3M 2890S Wide Panoramic Anti-Mist Goggle

code: AE011/2890S

features:

- Soft PVC frame with a wide support area all around the face to enhance comfort
- Specific channel on the side of the frame to accommodate the temple of prescription frames
- Aerodynamic shape with cylindrical lens for 180 degrees of distortion free vision
- Indirect ventilation system to prevent fog, liquids and fumes
- Conforms to EN 166.1.B



3M 1480-00001C Duraguard Safety Spectacle

code: AE002

features:

- Duraguard safety spectacles
- Black frame
- Traditional style clear anti-scratch twin lens
- Manufactured to EN 166



3M V6E Helmet Clear Lens Integrated Eyewear

code: AE054

features:

- The integrated lightweight eyewear are easy to attach to the lining of Peltor helmets
- The unique design allows the glasses to slide easily between the helmet shell and lining
- They feature several flexible joints to allow for individual adjustment
- The integrated eyewear fit closely to the wearers cheeks, providing excellent protection for particles, dust and so on, and are approved according to EN 166



3M V4C Mesh Visor

code: AHP/V4C

features:

- Visor made of stainless steel with a matt finish
- Low light reduction, thanks to the rectangular grid providing excellent protection from flying chips and splinters
- Excellent stability, even after long use
- Conforms to EN 166.1.B



3M V4D Clear Acetate Antifog Multi Visor

code: AHP/V4D

features:

- Lightweight anti-fog acetate faceshield system helps provide reliable face protection from splash, other particles and debris
- 3M provides reliable head and face protection products that meet regulated performance and safety requirements
- Protective eyewear should be worn under faceshields at all times
- Protective eyewear sold separately
- Aerodynamic shape with cylindrical lens for 180 degrees of distortion free vision
- Indirect ventilation system to prevent fog, liquids and fumes
- Conforms to EN 166.1.B



3M 83735-00000 Super-Clear Disposable Protective Eyewear Lens Cleaning Station code: AELENS

features:

- ▶ Disposable protective eyewear lens cleaning station
- ▶ Contains 16oz. pump and bottle of cleaning fluid
- ▶ Also contains 1500 sheets of lens cleaning paper
- ▶ Ready to hang



PELTOR™

WP96 Polycarbonate Shield

code: AH027

features:

- ▶ 2mm thick
- ▶ Clear polycarbonate visor with dimensions (230 x 370 mm)
- ▶ Excellent protection against impacts and fluids and heat
- ▶ Shield goes inside the attachment for extra support
- ▶ Conforms to EN 166.1.B



PELTOR™

V4F Clear Polycarbonate Multi Visor code: AH027

features:

- ▶ Clear polycarbonate
- ▶ Unique linkage for working and standby positions
- ▶ Specially designed peak protects eyes from glare and reflection
- ▶ High heat tolerance
- ▶ System can be used with a variety of hard hats or with Peltor muffs
- ▶ Conforms to EN 166.1.B