

Applied Safety

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WELCOME to the second issue of Applied Safety the Applied Inspection health & safety newsletter.

In this edition we will look at vision and eye protection

EYES AND EYE PROTECTION

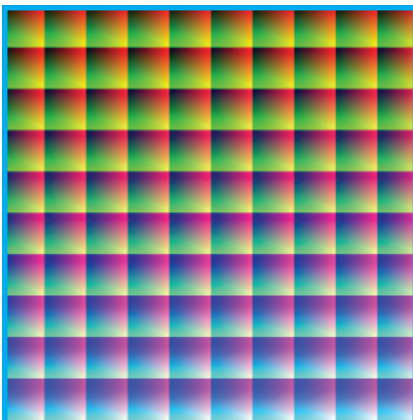
Eyes, the window to the soul, so it is said. In paintings, the eyes follow you round the room, even if you don't want them to. Babies naturally focus on the



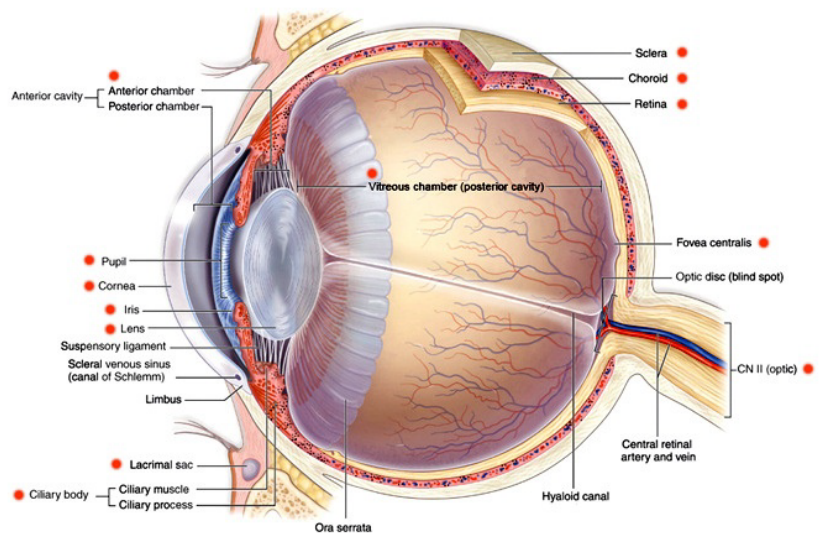
eyes of faces they see. Eye contact across a crowded room can be wonderful... or quite scary. Human eyes are amazing and are

different to other animals. Human eyes have much larger white areas and that makes it much easier to track the movement of human eyes, and allows human

eyes to communicate much better. Our eyes express emotion, fear, surprise and many other things much better than other animals.



This image, full sized, contains 1 million different colours, quite a bit short of the 10 million colours the human eye can distinguish. That is the same as other primates and significantly better than most non-primate mammals. Some insects and birds, however, can distinguish around 10 billion colours! This is around 1000 times as many colours as a normal human eye.



If you asked people which of their five senses they would least wish to lose, most people would say their sight is the most important, by a significant margin, and the one they would least like to lose. That may be because we receive around 80% of the information we get each day through our eyes.

It may be because sight is so precious and important to us that there is such a bewildering array of European standards for eye and face protection and such a variety of that protection. All of the standards are intended to contribute to improving the levels of eye protection.

European standards specific to eye protection

A list of the main standards is below - there are many other more specialist application and detailed specifications.

- EN 166:2001** Personal eye protection - specifications
- EN 169:2002** Filters for welding and related techniques
- EN 1731:2006** Mesh type eye and face protectors
- EN 169:2002** Filters for welding and related techniques
- EN 175:1997** Eye and face protection during welding and allied processes
- EN 379:2003** Personal eye-protection - Automatic welding Filters
- EN 207:1998** Filters and eye protection against laser radiation
- EN 207:2009** Filters and eye protection against laser radiation
- EN 208:1998** Personal eye protectors for adjustment work on lasers
- EN 208:2009** Personal eye protectors for adjustment work on lasers
- BS 8497-1:2008** Eyewear for protection against intense light sources used on humans and animals for cosmetic and medical applications: Part 1 - Specification for products
- EN 14458:2004** Face shields and visors for fire fighters, ambulance and emergency services. Corrected 2004
- EN 174:2001** Ski goggles for downhill skiing
- BS 7930-1:1998** Eye protectors for racket sports - Squash.

Each standard has around five different sections with around five options in each section. That gives around 350 different types of eye protection to choose from for things like ultra-violet protection, infra-red protection, mechanical strength, optical clarity, impact resistance, scratch resistance, chemical resistance and lots more. Thankfully there are also guidance specifications on how to select the most appropriate eye protection for specific applications and risks.



Aside from the obvious aspect of providing the correct protection, user comfort and acceptance has been recognised as the two most important aspects of selecting eye protection.

Many of the standards for eye protection are also applicable to prescription eye protection, and most types of eye protection can now be sourced with prescription optics.

All of this effort to improving the protection offered by eye protection and to improve the comfort of eye protection has been to assist in ensuring eye protection is used when there is a risk of eye damage or injury.

Even the best, most carefully selected eye protection, however, will not make our eyes invincible, but any eye protection, even if not absolutely the most suitable, will almost always be better than no eye protection. Eyes are so precious to us there are many good reasons for wearing eye protection all the time in unpredictable environments like engineering workshops, and always when using impact or striking tools or anything that introduces dust or liquid as droplets to the atmosphere. The list of individual work tasks, or even generic types of work, that makes eye protection worthwhile is far too long to list here. The list of work tasks that will not benefit from correct eye protection is much simpler... none.