Introduction

Despite every precaution to prevent them occurring, accidents happen. The rapid pace of certain industries where risk is an inherent part of the everyday means that workers in roles based in factories; on mining and building sites; in the health, defence, energy and petrochemical industries; and first responders to emergencies are likely to encounter the unexpected in the course of their jobs.

This does not mean, of course, that the harm accidents can cause should not be addressed. In fact, it is the responsibility of managers to ensure that appropriate plans and equipment are in place to mitigate foreseeable harms to their workforce.

Because the nature of accidents in these industries can often be both sudden and critical, appropriate responses need to be delivered rapidly, reliably, and in strict compliance with safety regulations in order for them to be effective.

**FAST FACTS: Eye Health in the Workplace**

- Up to 50,000 eye injuries occur per year – that’s seven out of every 1000 workers!
- 60% of eye injuries in Australia occur in the construction, mining, agriculture, forestry and fishing industries
- These injuries cost around $60 million per year and result in about 500 hospital admissions per year
- The majority of workplace eye injuries are caused by foreign objects entering the eye, such as metal fragments or other lightweight foreign bodies.
- **Males are more susceptible to eye injury.** Nearly 87% of all compensation claims for eye injuries from 1999-2005 involved males
- During this period, the average time spent absent from work after an eye injury was 1.6 weeks to 2 weeks.

Sources: ComCare; SafeWork Australia; Safe to Work

Eye on Compliance

Some specialists can be unaware of their responsibilities to provide emergency shower and eyewash systems as initial first aid treatment for many hazardous contaminants as part of WHS risk assessments, the provision of which, is covered by Australian Standard AS4775-2007.

Australian Standard AS4775-2007 was prepared in response to requests from industry, as well as manufacturers and suppliers, who demanded a clear set of guidelines to minimum expectations in regards to performance and user requirements for emergency showers and eyewashes.

It is important to remember that emergency equipment is only a part of a system and the performance of this equipment is dependent on such conditions as correct installation, minimum water flow rates and supply pressure as specified by AS4775-2007.

For this reason, it is strongly recommended that all new sites, renovations or existing facilities undergo an WHS audit, to identify any areas where there are deficiencies such as in the hydraulic system which can prevent emergency equipment operating to the minimum requirements of the Standard.

Emergency eyewash and eye/face washes can be classified as primary equipment if they are able to operate, once activated, continuously without hands being required for a minimum of 15 minutes and at the minimum flow rates and spray patterns as dictated by the Standard, otherwise they are classified as supplemental [see “Primary vs Supplemental Eyewash” box].

Supplemental equipment such as personal eyewash can play an important part in the treatment of an eye injury as they allow for an immediate response...
in the seconds following an injury before the injured individual proceeds to a primary system to allow flushing of the eyes for 15 minutes if required. This supplemental equipment is designed to support primary systems, not replace them.

Primary systems must be installed in situations where a person may be exposed to material which can cause injury and should take no longer than 10 seconds to reach in case of an emergency. They should be on the same level as the hazard and the area to the system free from any obstruction that may delay or prohibit use of the equipment.

The temperature of flushing fluid is also raised in the Standard which states that the fluid supplied should be tepid which is described as moderately warm or lukewarm. Although there is no medically or industry accepted specified temperature range, the Standard recommends a range of 15.6°C – 37.8°C. Before emergency eyewash or shower equipment is selected a risk assessment should be instigated to determine the appropriate temperature for each application.

If in doubt as to what emergency equipment and procedures are required in the event of an accident Safety Data Sheets (formerly called Material Safety Data Sheets) are required by WHS laws to display information about hazardous substances, including correct emergency equipment and procedures.

Australia’s stringent safety laws exist to provide workers with the best safeguards against injury. Since these Standards are law, workplaces are required to meet the minimum they describe, or they may face legal action. By checking that the emergency system you install meets or exceeds those Standards, you can go a long way towards ensuring that you are upholding your duty of care.

It can be disconcerting to think that the equipment one relies upon for protection in an unforeseen and dangerous circumstance might not meet the most basic safety requirements, or not designed in such a way that it is easy to use by a person who is in pain.

Possibly one of the best strategies for ensuring reliable emergency eye/face wash and shower equipment is to invest in a brand that can demonstrate their effectiveness not just in meeting the Australian Standards, but a brand that has also dedicated themselves to perfecting the systems to encourage proper and effective use.
Who’s to Blame for All These Eye Injuries?

As outlined under section 19 or the Work Health & Safety Act 2011, responsibility for worker safety predominantly lies with the PCBU – ‘person conducting a business or undertaking’. This can include employers, operators, principal contractors or franchisors, but it is important you determine who is considered a PCBU at your workplace, as this is where the primary duty of care resides.

However, under Section 28 of the WHS Act workers are required to take reasonable care of their own health and safety, and to comply with reasonable safety instructions. This protects a company from being subject to compensation claims in the event a worker injures themselves through their own negligence, regardless of the safety parameters the PCBU has put in place.

According to the Australian Safety & Compensation Council, many eye injuries occur because the worker is not wearing appropriate eye protection. However, there are also a large number of incidents that occur when workers are wearing eye protection. According to the Centre for Eye Research Australia, this number is as high as 45% of injuries, which speaks to a lack of knowledge and training around how to properly protect eyes.

Sources: Work Health & Safety Act 2011; SafeWork Australia; Australian Safety & Compensation Council; Centre for Eye Research Australia
Primary vs Supplemental Eyewash

Both the American and Australian Standards refer to primary eyewash and supplemental eyewash systems. But what's the difference, and when should each be used?

Among other attributes, Primary Emergency Response devices will...

• Activate within a second or less
• Operate hands free
• Flush both eyes simultaneously
• Deliver no less that 1.5 litres a minute of tepid flushing fluid, preferably aerated, for a minimum of 15 minutes.

Supplemental eyewash devices...

• Do not meet the requirements for primary response according to the current Standard
• Intended as a support system, not in place of Primary Emergency Response Systems
• Usually located near a hazard and are used in the interim until someone reaches a primary station
• They do not provide 15 minutes of continuous, hands-free flushing

Sources: EHS Today

Safety That Meets the Standard... And Goes Beyond!

Enware has built a name for itself as an innovative and high quality manufacturer of emergency equipment. With an emphasis on technological solutions that address the specific safety concerns of workers, Enware emergency systems are independently certified to meet both Australian Standard AS4775-2007 and American Standard ANSI Z 358.1-2009

Because eye damage can occur within seconds, Enware has developed its own 'Vertex' technology, integrating a dedicated eyewash with independently angled face wash streams to deliver optimum coverage to flush the facial regions. The zero velocity apex point provides more comfort and control for effective cleansing of eyes, minimising the risk that users will not wash effectively due to discomfort while flushing their eyes. The technology Enware incorporates into their emergency systems allows a constant flow of water at a pressure which is non-injurious to damaged tissue even at pressures above 550kPa, which the Standard suggests as the maximum pressure before caution should be taken.

Along with Vertex technology Enware has also incorporated a self-draining feature into their systems. This feature reduces the risk of Legionella bacteria developing, particularly in tepid water applications.

Enware are experts in providing solutions that perfectly suit your requirements. They offer advice to assist with the location of emergency systems, advice on the Standard and can discuss accessories such as thermal insulation, anti-scald valves, emergency lighting, monitoring and alarm systems.

In the event of an accident, Enware, with their knowledge and expertise in the design and manufacture of safety systems are able to provide a solution to ensure your facility provides the best possible response when required.
REFERENCES