Overall benefits

If companies needed more incentive to buy the right personal protective equipment, they're about to get it with the new Corporate Manslaughter Act. Steed Webzell explains

The Corporate Manslaughter and Corporate Homicide (Scotland) Act 2007 will enter the statute books in June this year. Under its provisions, it will be easier for companies of all sizes to be successfully prosecuted for causing the death of an employee or anyone else in their care – mainly because it will no longer be necessary to prove the presence of a 'controlling mind'.

Critics argue that it adds little to the provisions of the Health and Safety at Work Act 1974, or PUWER (Provision and Use of Work Equipment Regulations). Nevertheless, it will draw attention to the legal obligations on employers, in terms of their duty of care – and that absolutely includes providing suitable PPE (personal protective equipment).

The type of PPE most relevant here is likely to be that designated as Category 3, covering products and environments where users may be exposed to mortal danger. Depending on the circumstances and nature of risk, this category includes fall protection equipment, respiratory protection products and the serious end of protective clothing.

But, before even looking at equipment types, the first step should always be a risk assessment. It's the outcome of this analysis that determines the requirements for properly protecting employees, in accordance with the relevant standards – and that reduces the risk of prosecution under existing or the new legislation. Given that spending hard-earned profits on safety equipment remains a bugbear for budget-conscious companies, it's also your best route to justifying the investment – not to mention avoiding false economies.

Which is a serious point. As Jim Findlay, product specialist for industrial work wear at WL Gore and Associates, says: "Developments in PPE over the past 30 years have contributed significantly to prevention of injury and saving life in the work

Significant PPE innovations

While the working environment at every plant and factory demands its own PPE, the requirement for ear defenders is common to a wide range of workplaces. One of the most innovative PPE products launched this year now allows plant engineers to know precisely what protection they're getting. It's the EARFit validation system, available from Aearo, which uses an F-Mire (field microphone in real ear) in place of conventional tone response tests or statistical data.

The device has a dual element microphone that measures sound inside and outside an individual's ear. It takes eight seconds to obtain PAR (personal attenuation rating) data at seven standard frequencies (125Hz to 8,000Hz). The result: no more guesswork.

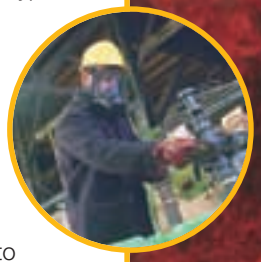
Other PPE innovations include the Protector FHK67, from Scott Health and Safety, which is a helmet-mounted face shield and carrier combination for electrical engineers that protects against flash exposure from electric arcs up to 1,000V. And there's the X-am 1100 personal air monitor, from Draeger, which provides up to 120 days' of gas and vapour detection that covers diesel fumes, oxygen, CO and H_2S. Also from Draeger is its PSS 7000 BA breathing apparatus – already adopted by AgustaWestland Fire and Rescue at Yeovil – which now features PSS Bodyguard II electronic monitoring. That unit has an LCD that provides data, including time to whistle (calculated on current air consumption) in pictogram format, and performs self-test health checks every time it's activated.

Draeger says it also works with a range of lone worker tracking and protection systems – another increasingly important aspect of PPE. And, on that subject, check out TBS Enterprise Mobility's new PSL (personnel safety locator): TBS claims that it's the first to integrate health and safety, risk assessment and location-based monitoring tools on a PDA, using GPS and wireless communications, as well as integration into a site's asset management system.

Finally, whatever the PPE you use, you also need to maintain it – which in itself can be somewhat specialised. Cannon Textile Care is one company offering services that, it says, will ensure your PPE meets with safety regulations, while also keeping it clean and serviceable. Basically, it's about washing plant combined with a computer system that provides an audit trail of the life of every garment – covering, for example, how many times it has been washed or repaired. The approach will go down well in highly regulated sectors, such as the rail and transport industries.

environment. However, diminishing budgets threaten to make quality PPE provision and worker protection more of a financial decision, rather than one focused properly on safety and protection."

Meaning that tight times might be getting in the way of proper protection that takes advantage of improved technologies. "Governments and industrial organisations, including health and safety experts, recognise that it is imperative to ensure that employees are kept safe in all environments where protective clothing is required. So procurement of PPE needs to be a structured, planned and well thought-out process – certainly not one that is in danger of misinterpretation or mismanagement," advises Findlay.



Standards have changed

That said, your risk assessment will focus on the work environment. Chemical plants, for example, exhibit different hazards to the rail sector, or the water and waste industry. Obvious, yes, but as Ian Samson, sales and training specialist at DuPont Personal Protection, points out, it's important not to make too many assumptions. "For example, CE Type 5 and 6 standards [protection against solid airborne particulate and limited protection against liquid mist, respectively], for testing chemical protective clothing, have changed since 1997 – yet some garments still only meet previous test requirements."

Samson advises that standards insist that Type 5 clothing must be subject to a particle inward leakage test, in accordance with EN 13982-1, while low-level spray tests for Type 6 suits must be to EN 13034 and EN 468. He warns plant engineers, particularly at chemical sites, to check neck labels or instructions for use on garments – observing that these amount to legal documents. "The manufacturer is under an obligation to state to what type a suit corresponds and to indicate what performance levels its materials meet."

It's a serious point: recent HSE research reveals that incorrect PPE selection – as well as inadequate maintenance and/or lack of training – are the major contributory factors in almost two-thirds (63%) of the 9,000-plus incidents that mention PPE every year. And it's not only about adhering to the standards; another of the underlying issues behind that statistic is that PPE may be incompatible. That, in turn, means it can be uncomfortable, leading to misuse or, worse, non-wear time.

So PPE compatibility is extremely important. As Jo Partridge, technical service manager at PPE developer 3M, says: "Construction, paint spraying, welding, food manufacturing and the emergency services face hazards that often require more than one type of PPE. Selecting incompatible models can be due to lack of knowledge or confusion over technical requirements. But it can also be down to substitutions by purchasing, or simply the result of users believing that, if products are CE marked, they are appropriate for use with other products.

"They might well not be. For example, protective eyewear may interfere with the face seal of a respirator and reduce protection. Or helmet-mounted ear defenders may fit onto a hard hat, but may not be approved. Incompatible PPE can expose workers to the risk of occupational ill-health or injury, which could lead to litigation." PE

Pointers

- Step One in PPE selection should be a risk assessment
- Step Two must be a structured, planned and well thought-out process, not one where procurement departments are allowed to make substitutions
- Be aware that some standards have changed to reflect improved technology
- Particular care needs to be taken around PPE compatibility to avoid no-wear time
- Failures here leave companies open to litigation