

An Innovative Approach for Respiratory Exposure Hazard Control

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ABSTRACT

The 'Control of Substances Hazardous to Health Regulations' (COSHH) were first made in 1988. These set out the framework for the prevention or adequate control of exposure to chemical agents. The framework included the role of occupational exposure limits (OELs) in assessing the adequacy of exposure control. There are around 600 substances in the current list of OELs. However, there are approaching over 100,000 substances listed in the European Inventory of New and Existing Chemical Substances (EINECS). The vast majority of these substances have neither official nor in-house OELs. Large companies use OELs for risk control. However, small and medium sized enterprises (SMEs) employ around 90% of the UK workforce. Health and Safety Executive (HSE) research showed that industry's perception and knowledge of OELs was limited and that they played little part in workplace risk management. The use of personal protective equipment (PPE) featured strongly. Further research indicated that SMEs needed alternative approaches to help them meet their duties under COSHH.

HSE used the following criteria to develop new approaches that SMEs could use:

- the approach should deliver practical help to SMEs;
- the best use should be made of any available health hazard information;
- the approach should be easy to use and understand; and
- any information needed should be readily available to SMEs.

These criteria led to a number of innovative developments including easy steps for identifying engineering control measures and adequate and suitable respiratory protective devices (RPD).

This paper will describe these new approaches, which do not depend on OELs and the measurement of personal exposure. The approach uses five Hazard Groups based on health Risk-phrases, known as R-phrases. The potential for inhalation exposure is classified through four 'physical property' bands and three 'quantity used' bands. Engineering controls and RPD are identified according to the Hazard Group and Exposure Bands using assignment tables.