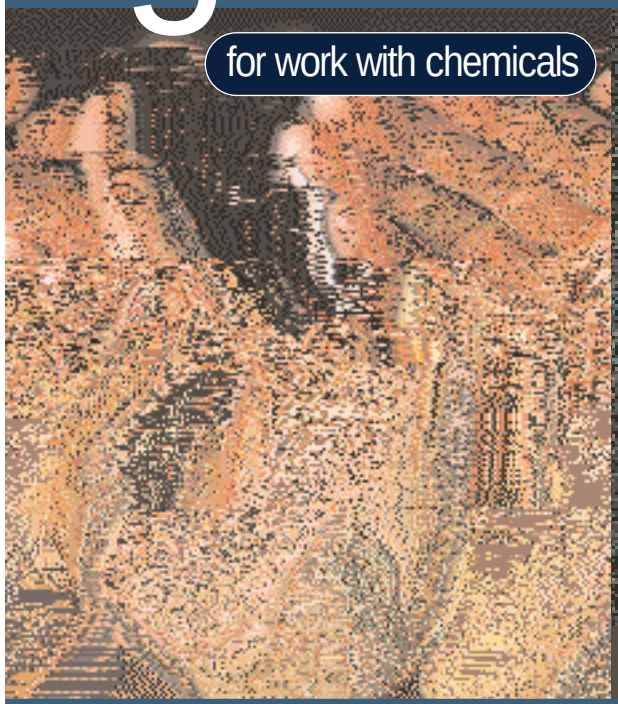
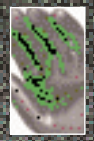
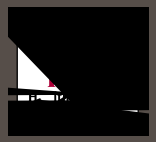
Selecting

protective gloves

for work with chemicals







Guidance for employers and health and safety specialists

Introduction

UK industry spends about £30 million a year buying chemical protective gloves to use as personal protective equipment (PPE). Such gloves are available in a wide selection of natural and synthetic materials and range in price from 25p to £60 a pair (March 2000).

This leaflet provides practical advice to employers and self-employed people on how to select the best chemical protective gloves to withstand exposure to chemical agents and so meet the prime requirement of PPE,[1] which is to protect the wearer.

All liquids, solids, gases, vapours, aerosols, fumes, dusts and fibres are chemical agents. They are called chemical agents to distinguish them from biological agents (such as micro-organisms) and physical agents (such as noise, vibration and friction).

Managers, supervisors, employees, health and safety professionals, safety representatives and trade union representatives will also find this leaflet useful.

The law

The law requires that employers make a suitable and sufficient assessment of the risks to health from exposure to chemical agents at work. This is covered by the Health and Safety at Work etc Act 1974 (HSW Act)[1] and the Control of Substances Hazardous to Health Regulations 1999 (COSHH).[2]

If it can be clearly shown that:

- there are situations at work where risks to health and safety are unavoidable; and
- methods of control other than protective gloves are not reasonably practicable;

employers have further legal duties to provide suitable protective gloves to any employee who may be exposed to such risk.[3] Any protective gloves provided must be manufactured to the appropriate standard and be compatible with:

- the wearer;
- the work to be done;
- any other PPE to be worn, such as aprons, overalls or shoes.

Chemical resistance of protective gloves

Protective gloves are available in a wide range of natural and synthetic materials; however, there is no single glove material (or combination of glove materials) able to provide unlimited resistance to any individual or combination of chemical agents. There are three ways in which any protective glove will, at some stage, fail to protect the wearer from exposure to any chemical agent and these are:

permeation – the process by which a chemical agent

glove. If workers' gloves are significantly contaminated for extended periods, the neoprene glove may be required. If, however, there is only occasional splashing of chemical onto the glove, then the less costly natural rubber glove may be adequate.

Other factors to consider are the manual dexterity required for the job and required length of the glove (ie do you need gauntlets?). If workers cannot do their job because the glove material is too thick or stiff, then they may decide not to wear them.

Always remember that if the inner surface of a glove becomes contaminated, it will not matter how much care, attention and expertise has gone into the selection process – exposure will occur. If, for example, you have to take off your contaminated gloves temporarily, your hands may become contaminated from handling the gloves. If you then put the same pair of gloves back on again, you could transfer the chemical contaminant to the inside surface of the glove. To prevent this, you should wash the gloves thoroughly before taking them off.

Remember that:

To protect the wearer, gloves must be used properly!

Further reading

Health risks management: A guide to working with solvents HSG188 1999
HSE Books ISBN 0 7176 1664 9

Latex and you INDG320 2000 HSE Books

HSE will publish further guidance on dealing with skin exposure in early 2001:

Assessing and managing risks at work from skin exposure to chemical agents

Cost and effectiveness of chemical protective gloves

Choice of skin care products for the workplace: Guidance for employers and health and safety specialists

References

1 *The Health and Safety at Work etc Act 1974*
HMSO 1974 ISBN 0 10 543774 3

2 *General COSHH ACOP and Carcinogens ACOP and*