



# Training operatives and supervisors for work with asbestos insulation and coatings

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demonstrated by past experience of illness and death among people exposed to asbestos without adequate protection. A comprehensive training programme is essential for the protection of employees and to prevent risk to the public.

## INTRODUCTION

1 This Guidance Note has been prepared by the Health and Safety Executive (HSE) following a recommendation by the Construction Industry Advisory Committee Asbestos Working Party and consultation with representatives from all sides of industry. It amplifies the advice given in the Approved Code of Practice (ACOP) COP3 Work with **asbestos insulation, asbestos coating and asbestos insulating board**.

## LEGAL ASPECTS

5 The Health and Safety at Work etc Act 1974 imposes duties upon employers, self-employed and employees to ensure, so far as is reasonably practicable, that no one is exposed to a health risk from asbestos removal activities.

6 The Act imposes a specific requirement on employers, so far as is reasonably practicable, to provide information, instruction, training and supervision to ensure the health and safety at work of their employees. An employer's safety policy (which is required by companies with five or more employees) should make specific reference to the company's training programme.

7 Employers are required to ensure, so far as is reasonably practicable, that their work with asbestos does not expose their employees, or anyone else, eg members of the public and employees of other companies, to risk.

8 Self-employed people are required, so far as is reasonably practicable, to carry out their work so that they and others are not exposed to risks to their health and safety. A self-employed person must have sufficient expertise to carry out asbestos removal work safely.

9 All employees are required to take reasonable care for the health and safety of themselves and others who may be affected by their acts or omissions. They must also cooperate with their employer on health and safety matters. If a supervisor or employee is given a particular task or responsibility and fails to take reasonable care he or she, as well as the employer, may be liable to prosecution.

10 The Control of Asbestos at Work Regulations, which came into force on 1 March 1988, contain a specific regulation on training. The ACOP, *Work with asbestos insulation, asbestos coating and asbestos insulating board*, provides guidance on current legislation

## SCOPE

2 This Note deals with employers' responsibilities for training operatives and supervisors. It is also relevant to the self-employed engaged in asbestos removal work, and will help employees and their representatives to check that adequate training has been given.

3 The Note is aimed principally at people who work with asbestos insulation and coatings, within the scope of COP3 and the Asbestos (Licensing) Regulations 1983. The work involved includes that in which asbestos insulation or asbestos coatings are removed, repaired or disturbed, and any associated supervisory or ancillary work. The Note does not relate to work with other asbestos-containing materials, although its contents may be relevant to major works with asbestos insulating board.

## THOSE AT RISK

4 Work with asbestos insulation and coatings can give rise to high levels of asbestos dust, endangering not only the people directly involved but also others in the vicinity, including the public. Failure to follow the necessary precautions could have serious long-term consequences for those exposed. The risks are well

concerning the risks to health from work with asbestos insulation and coatings and covers training requirements.

11 With certain limited exceptions work with asbestos insulation and coatings may be carried out only by a licensed contractor under the Asbestos (Licensing) Regulations 1983. It is a general condition of all licensees that adequate information, training, instruction and supervision are given to employees. In addition, all licensees undertake to comply with the relevant legal requirements and the current ACOP. Although failure to observe any provision to the code is not in itself an offence, that failure may be taken by a Court in criminal proceedings as proof that a person has contravened the Regulation or section of the HSW Act to which the provision relates. In such a case, however, it will be open to that person to satisfy the Court that the Regulation or Section of the Act has been complied with in some other way.

12 Further information on the regulations can be found in HSE Booklet HS(R)19 *A guide to the Asbestos (Licensing) Regulations 1983*.

## TRAINING PROGRAMME

13 Training should adequately cover all matters relating to a person's health and safety at work. How this is dealt with should be outlined in a training programme covering all employees who work with asbestos insulation and coatings. The programme should set out:

- (a) how new and existing employees will be trained;
- (b) arrangements for regular assessment and maintenance of each employee's training record;
- (c) arrangements for assessment of employees' training needs.

It is especially important that supervisors pay special attention to checking the suitability and progress of new and inexperienced operatives. Personal appraisals will also be useful in deciding whether people can be promoted at a later stage to oversee others, or assigned to other duties if they do not attain an acceptable level of competence. The programme itself must be regularly reviewed to ensure its relevance.

14 One decision that must be made by an employer at an early stage is whether training will include courses run by outside professional organisations or will remain in house. Whatever decision is reached it should be realised that solely sending employees on a course does not fulfil their training needs. The details of the company's own safety policy and the systems of work adopted are also matters that will have to be communicated directly by the company to the employees concerned.

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## ASSESSMENT OF TRAINING NEEDS

### New recruits

15 Everyone employed to work on asbestos insulation or coatings must have their training needs assessed before they start work. Although some employees may have worked in the industry before, it should not be assumed that their experience is sufficient. Employees may be unaware of their new employer's safety policy, the particular systems of work currently in force or the protective equipment used. They may also have received inadequate training in the past and may not fully appreciate the dangers of asbestos. Training is therefore necessary for all new employees.

### Existing employees

16 The continuing training needs of existing employees should be assessed regularly. There are two types of additional training: refresher training and training that deals with new information. Employees should be given sufficient information, instruction and supervision to maintain the competency gained at initial training: refresher training will be needed if work shows inadequacies or deficiencies. It is desirable that refresher training covering all aspects of an employee's work should be given at least once every three years.

17 Restraining involving new information may usefully be combined with a refresher course. Restraining may be necessary for a number of reasons, but particularly when there are changes in the law relating to asbestos, changes in the equipment used, especially personal protective equipment such as respirators, or changes in working practices or systems of work.

### Management and supervisors

18 Managers and supervisors of personnel engaged in asbestos removal should have detailed knowledge of the risks involved and the precautions to be taken. Their training needs to be commensurate with their level of responsibility. A manager's/supervisor's duties should be clearly outlined in the safety policy statement and incorporated in the training programme.

### Self-employed people

19 A self-employed person who is regularly engaged in the removal of asbestos insulation needs to have the same knowledge and competence as managers and supervisors. All self-employed people need to acquire expertise and knowledge before they start work.

### Others

20 The training programme should cover visitors to the site, if it is likely that they will be exposed to asbestos. It is important that visitors recognise the hazards involved, are acquainted with the procedures for decontamination, and if necessary are given adequate instruction in the use of protective equipment.

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## CONTENT OF TRAINING

21 Training should provide the information, advice and practical experience which allows people to carry out their jobs without endangering themselves or others. Training will cover general requirements as well as specific instruction. Although emphasis is placed on matters relating to asbestos there will be other areas where instruction is needed which should be included in the same programme.

22 Appendix 1 indicates the range of items which should be considered for inclusion in any training programme for the asbestos removal industry. The content may vary, as the needs of ancillary staff such as carpenters, scaffolders and electricians are different from those of staff involved in asbestos removal. However, all staff should be able to recognise hazardous situations.

## TRAINING TECHNIQUES

23 Training techniques include audio/visual presentations, written material, practical instruction and formal presentations. A successful programme will incorporate a range of methods, with the emphasis on practical instruction. Practical training is essential when dealing with the selection, use and maintenance of respiratory protective equipment (RPE), decontamination procedures and the erection of enclosures.

24 The practical aspects of training should be provided by instructors and supervisors with extensive knowledge and experience of work with asbestos insulation. Instructors should be mature, experienced people selected for their patience and ability to communicate. The role of the supervisor in training should be clearly defined.

25 Training should make full use of the aids and current literature published by HSE (Appendix 2).

## STRUCTURE AND DURATION OF TRAINING

26 Initial or induction training should be given to employees in three stages. Sufficient time should be allowed, taking account of an employee's previous knowledge and experience. For a person coming to this work for the first time it is envisaged that the first stage would normally take 1 to 2 days. It would include

practical exercises on fitting and using RPE, erecting and testing enclosures, decontamination procedures etc. This initial training would be followed by three months' supervised work. A one-day consolidation of the theory and practice would complete the training. At this final stage the emphasis would be on the law and in particular the ACOP.

27 The trainee's performance must be assessed at regular intervals so that the course instructor can keep the employer informed on progress. A multiple choice examination, set by the course instructor, may be a suitable indication that the trainee has successfully completed training. A trainee whose performance is unsatisfactory should not be permitted to work with asbestos, except under close supervision, until additional training has been given and a satisfactory level of performance has been achieved.

28 Supervisors require more detailed knowledge than the ordinary operative, and should therefore be given one or two days' extra training.

## MONITORING AND RECORD KEEPING

29 To ensure its effective implementation and relevance all aspects of the training programme should be monitored. Although supervisors have an important part to play, formal monitoring should be the responsibility of senior management. In larger organisations this would be the training or personnel officer, whereas in smaller companies the contracts manager may perform this coordinating role. In all cases the directors or owners of the company should take an overall interest in and responsibility for the training programme, and should monitor its effectiveness. The arrangements for monitoring should be set out in the safety policy.

30 Adequate record keeping is essential for effective monitoring. A training record should be kept for each individual. This may include the types of training received, dates and comments on subsequent progress indicating whether the training has been effective. The records should also be used to ensure that refresher training or restraining is carried out. In addition, they may include other personal details such as statutory medical certificates. The records should normally be kept at the head office although for large long-term contracts it may be more convenient to keep them on site.

31 Upon successful completion of a particular stage or level of training an operative should receive a certificate of attendance.

## TRAINING SYLLABUS

Copies of this Guidance Note or relevant Code of Practice should be issued to employees together with a set of training course notes which summarise the main points covered. These will provide a valuable reminder. The syllabus set out below covers everyone, including supervisors and self-employed. Additional matters covering supervisors and self-employed are set out at the end of the Appendix.

**Asbestos in buildings**

Main types of asbestos; asbestos coating materials; uses of asbestos material; identification of asbestos, including bulk sampling.

Treatment of asbestos in buildings including sealing, encapsulation and removal.

Reference should also be made to emergency work and remedial action.

**Health hazards**

Diseases associated with asbestos, including the death and illness rates among insulation workers and the possible incidence of disease among workers' families where they have been exposed to contaminated overalls or clothes. It should be mentioned that at present there are no cures for the diseases and that only by following the laid down precautions strictly can they be prevented. The relationship between cigarette smoking and lung cancer should be emphasised.

Medical surveillance requirements and the need to attend medical examinations.

Routes of entry into the body with emphasis on the need to prevent inhalation and ingestion of asbestos fibres.

**Asbestos legislation**

The Health and Safety at Work etc Act 1974

The Control of Asbestos at Work Regulations 1987

HSC Approved Code of Practice COP3 *Work with asbestos insulation, asbestos coating and asbestos insulating board* (revised March 1988)

Asbestos (Licensing) Regulations 1983

Asbestos (Prohibitions) Regulation 1985

Control of Pollution (Special Waste) Regulations 1980 and any subsequent legislation.

Emphasis should be placed on the duty and responsibility of employees to:

- (a) cooperate with their employers to enable them to carry out their duties and responsibilities;
- (b) do nothing that will endanger themselves or others;

- (c) report any defect or inadequacy in the system of work that could present a health risk.

Obligations towards members of the public and the effect on employees of revocation of an asbestos licence should be pointed out.

**Assessment of exposure**

Control limits, measurement of airborne asbestos dust and assessment of control measures.

Sample procedures which should include information on personal sampling, static sampling and clearance monitoring.

It should be stressed that control limits are not safe levels and that exposure should be reduced to the minimum. Reference may also be made to action levels and their significance, although for all practical purposes asbestos removal work will always exceed the action level.

Methods of working and control of exposure

Objectives of control measures: to prevent or reduce airborne asbestos or, failing that, to prevent inhalation and ingestion.

Site preparation: enclosure of the working area, including the precautions to be adopted when constructing enclosures, negative pressure systems, entry/exit locks, visual examination of the enclosure and smoke testing. Safe means of access and place of work should be detailed and the sealing and decontamination of scaffolds should also be covered.

Maintenance of the enclosure, cleaning the area, sealing the enclosure prior to dismantling and assessment of the site for normal occupation.

Methods of removing lagging including dry stripping, controlled wet stripping and any particular methods adopted by the employer such as direct removal vacuum techniques, water jetting etc.

Information on how the insulation was applied, as knowledge of this helps in understanding how to remove it.

The need to keep the amount of dust in the air to a minimum by such methods as controlled wet stripping, cut and wrap techniques etc.

The precautions necessary when working near electrical apparatus when using wet stripping methods.

The limitations and the necessary precautions to be adopted when using proprietary systems.

Respiratory protective equipment

The circumstances when RPE must be worn (ie whenever exposure above the control limit is expected): these may include inspection of the work area, bulk sampling, tenting out, work inside the enclosure and maintenance of contaminated equipment.

Criteria used in the selection of RPE, including reference to the Certificate of Approval (F2486) issued by HSE.

The protection factors of particular forms of RPE and the maximum dust levels they protect against.

The training package on Reproduced by HSE ***Training in the use of RPE for asbestos insulation removal*** should be used unless adequate and comprehensive alternatives are available. Reference should also be made to HSE Guidance Note EH41 ***Respiratory protective equipment for use against asbestos***. Training should have a practical element and should ensure that each trainee knows:

- (a) how to use the respirator properly;
- (b) how to check that it fits by carrying out a fit test;
- (c) when to wear it;
- (d) how to keep it clean and free from asbestos dust;
- (e) how often the filter should be changed and how to do it safely; and
- (f) where the respirator should be stored to keep it clean when not in use.

Protective clothing, de-contamination procedures and hygiene facilities

The provision of overalls, headgear, footwear and gloves; the use of distinctively coloured transit overalls. Where necessary the decontamination of other protective equipment (eg eye protection, ear defenders) should be included.

The correct de-contamination procedures to follow when entering and leaving the enclosure, with emphasis on the need to follow these procedures every time the working area is left.

Procedures for using hygiene facilities adjacent to the enclosure and during transit procedures.

The use of suitable vacuum cleaners to BS 5415 Type H to clean up waste and to carry out de-contamination.

The frequency of changing protective clothing; the need to bag up contaminated clothing and towels etc properly before sending them for specialist cleaning; if appropriate, the precautions to be adopted when undertaking such cleaning.

### **Maintenance of plant and equipment**

The need to ensure that all plant and equipment are properly maintained and tested should be emphasised. Plant and equipment to be covered will include;

- air extraction equipment,
- respiratory protective equipment,
- protective clothing,

- hygiene facilities,
- vacuum cleaning equipment and
- the enclosure of the asbestos working area.

In each case the frequency of visual inspections to detect obvious defects, and more thorough examinations and tests (such as smoke, airflow meters and sampling pumps where appropriate) to assess the efficiency of plant and equipment should be covered.

Keeping records on the maintenance and repair of all plant and equipment including protective clothing and RPE.

### **Waste disposal**

Proper disposal of asbestos waste, including the usual method of placing the waste in plastic sacks, cleaning them, double-bagging, sealing and adequate labelling.

The disposal of waste at licensed sites, and the importance of the security of asbestos waste awaiting disposal.

If appropriate, other waste disposal techniques such as baling, compaction in drums and vitrification. The precautions needed to contain the waste, whichever method is used, should be emphasised.

Arrangements for dealing with contaminated disposable overalls and filters and the precautions for dealing with contaminated water.

### **Syllabus for supervisors**

Additional matters to be covered when training supervisors are outlined below.

Proper procedures for setting up the site and ensuring that the enclosure and hygiene facilities are correctly installed and positioned.

The correct use and maintenance of all types of RPE used by the operatives and supervisor. Details of all plant and equipment that should be examined and maintained; keeping adequate records.

Where appropriate, correct use of monitoring equipment to assess the effectiveness of control measures adopted both during and on completion of the work. An air sampling strategy should be developed and executed by someone who has had adequate information, instruction and training for the task and can carry it out effectively. The general principles to be adopted are described in Guidance Note EH42 ***Monitoring strategies for toxic substances***.

**Close** supervision of newly trained operatives during the three-month period between the first and second stage training; reporting back procedures. If relevant, training techniques including communicating and imparting information.

## APPENDIX 2 TRAINING AIDS AND LITERATURE

### Training package

**Training in the use of RPE for asbestos insulation removal** distributed by CFL Vision, Chalfont Grove, Gerrards Cross, Bucks SL9 8TN

### Publications on asbestos

**Asbestos and you IND(G)17(L)** HSE 1984 (available free from HSE enquiry points and Area Offices).

*Work with asbestos insulation, asbestos coating and asbestos insulating board* Approved Code of Practice (revised March 1988) Health and Safety Commission COP3 HMSO 1988 ISBN O 118839799.

**Asbestos — Exposure limits and measurement of airborne dust concentrations** HSE Guidance Note EH 10 HMSO 1988 ISBN O 11885401 1.

**Probable asbestos dust concentrations in construction processes** HSE Guidance Note EH35 HMSO 1984 ISBN O 11883601 3.

**Work with asbestos cement** HSE Guidance Note EH36 HMSO 1984 ISBN O 11 8836021.

**Work with asbestos insulating board** HSE Guidance Note EH37 HMSO ISBN O 11 883603 X.

**Respiratory protective equipment for use against asbestos** HSE Guidance Note EH41 HMSO 1985 ISBN O 118835122.

**Asbestos** HSE Guidance Note MS13 HMSO revised 1988 ISBN O 11 885402 X.

**Certificate of Approval (Respiratory Protective Equipment)** HSE Form F2486 HMSO ISBN O 118838768.

**A guide to the Asbestos (Licensing) Regulations 1983** HSE Health and Safety Series Booklet HS(R)19 HMSO 1984 ISBN O 118837370.

*Asbestos materials in buildings* (2nd ed) Department of the Environment HMSO 1986 ISBN O 11 7518905.

*The provision, use and maintenance of hygiene facilities for work with asbestos insulation and coatings* HSE Guidance Note EH47 1986 ISBN O 118837370.

*Asbestos wastes: a technical memorandum on arisings and disposal including a Code of Practice* Department of the Environment Waste Management Paper NO 18 HMSO 1979 ISBN O 11 7513849.

### FURTHER INFORMATION

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