SELECTION OF SUITABLE RESPIRATORY PROTECTIVE EQUIPMENT

FOR WORK WITH ASBESTOS

HSE

Revised 2003
This guidance is primarily for employers and self-employed contractors throughout the construction and building maintenance industry; for people working with asbestos-containing insulation materials, including contractors licensed by HSE to do this sort of work. Safety representatives may also find it useful.

Why should I provide respiratory protective equipment?

Breathing in asbestos fibres can lead to asbestos-related diseases. These are mainly cancers of the chest and lungs and they kill more people than any other single work-related cause. There is usually a long delay between exposure to asbestos and the onset of disease. This can vary between 15 and 60 years. Smokers who are exposed to asbestos have an increased risk of developing an asbestos-related disease. The vast majority of people now dying of asbestos-related diseases were exposed to asbestos during the 1950s and 1960s when its use was widespread. But, there is still a lot of material containing asbestos around, and if you are responsible for work on it or stripping it out, you must do all you can to prevent or reduce the exposure of those affected (eg workers and visitors) as low as possible.
The exact level of exposure that causes asbestos-related diseases is unclear. But we do know the more asbestos fibres breathed in, the greater the risk to health. That is why it is important that everyone who works with asbestos should take the strictest precautions to reduce exposure to asbestos fibres as low as possible. This will include choosing the right respiratory protective equipment (RPE) for the job, making sure that it is used correctly and maintained in good condition.

When should I provide RPE?

The Control of Asbestos at Work Regulations 2002 require you to do all that you reasonably can to prevent exposure to asbestos fibres, or where prevention is not possible, to reduce exposure to the lowest possible level. In addition you must always provide suitable RPE if, despite the precautions taken, exposure to asbestos fibres is liable to exceed the ‘control limits’ laid down in the Regulations (see Table 1).

<table>
<thead>
<tr>
<th>TABLE 1 - Control limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control limits (fibres per millilitre of air averaged over)</td>
</tr>
<tr>
<td>Chrysotile alone (white asbestos)</td>
</tr>
<tr>
<td>All other types of asbestos (including mixtures of chrysotile with other types of asbestos)</td>
</tr>
</tbody>
</table>

You should not use RPE as your only control measure. You must reduce asbestos fibre concentrations in air to a minimum before using RPE.
Control measures to apply before resorting to RPE

For work involving asbestos, you must, where it is reasonably practicable to do so:

- enclose the work area and keep it under negative pressure;
- use controlled wet removal methods (eg water injection, damping down the surface to be worked on);
- use a wrap-and-cut method or glove bag technique where appropriate;
- use measures which control the fibres at source, for instance, by using type H vacuuming equipment directly attached to tools, but failing this, hand-held by a second employee right next to the source emitting the fibres (known as ‘shadow vacuuming’).

You should remember that dry removal processes are unacceptable. Further guidance on control measures to apply is given in HSE guidance booklets HSG189/1 Controlled asbestos stripping techniques for work requiring a licence and HSG189/2 Working with asbestos cement.

If you have reduced asbestos fibres in air as low as is reasonably practicable by using control methods at source but exposures are still liable to be above the control limits, you must always provide suitable RPE for your employees. The RPE provided must reduce the exposure as low as is reasonably practicable and in any case below the control limits.
RPE and CE marking

The RPE you provide must be marked with a ‘CE’ symbol. This means it meets the minimum legal requirements, usually by conforming to a European Standard.

If you have HSE-approved equipment made before 1 July 1995, you can continue to use it, as long as it is suitable and is properly maintained to perform correctly.

How do I select suitable RPE for my employees?

Very carefully and in consultation with them. Discuss it with the safety representative if there is one.

RPE must be matched to:

- the exposure concentrations (expected or measured);
- the job;
- the wearer; and
- factors related to the working environment.

Suitable RPE means:

- it provides adequate protection (ie reduces the wearer’s exposure to asbestos fibres as low as is reasonably practicable, and anyway to below the control limits) during the job in hand and in the specified working environment (eg confined spaces);
- it provides clean air and the flow rate during the whole wear period at least conforms to the minimum recommended by the manufacturer;
the facepiece fits the wearer correctly;
- it is properly maintained; and
- the chosen equipment does not introduce additional hazards that may put the wearer’s health and safety at risk.

When choosing RPE you need to think about:
- the expected concentrations of asbestos fibres in the air;
- the protection factor values of different types of RPE (see Tables 5 and 6);
- the potential for oxygen deficiency and/or the presence of other hazardous substances (eg solvent vapours) within the work environment. You should be aware that particulate filters used for protection against asbestos fibres will not protect against oxygen deficiency, gases or vapours. Work in oxygen-deficient atmospheres must comply with the requirements of the Confined Spaces Regulations 1997;
- the kind of work involved, eg more strenuous jobs may need a greater air supply;
- the temperatures at which people will be working;
- the facial characteristics of the wearers (eg beards, sideburns, stubble growth, glasses etc);
- the medical fitness of the people needing to wear the equipment;
- the length of time the person will have to wear the equipment;
how comfortable it is and whether people will wear it correctly for the required length of time;

whether the job involves extensive movements, restrictions and/or obstructions which need to be overcome while doing the job. In some circumstances the use of compressed airline breathing apparatus (CABA) may be impractical or can introduce secondary hazards such as tripping, entanglement, and the potential for spreading asbestos fibres outside the enclosure. The equipment may restrict mobility, making it difficult to work in restricted or heavily congested areas;

the need to communicate verbally during work; and

the effects of other personal protective equipment and other accessories on RPE (eg unmatched goggles may affect the face seal provided by the face mask; jewellery may interfere with the performance of the RPE).

More details on these aspects can be found in HSE guidance note HSG53 Selection, use and maintenance of respiratory protective equipment.
Expected exposure concentrations

You can make an assessment of the expected concentration of asbestos fibres in air by considering:

- how easily the material crumbles;
- how roughly you will need to treat it to do the job;
- how much of it you will be working on;
- how long you will be working on it;
- how effective the control measures at source are in reducing the spread of dust and concentrations of asbestos fibres in air;
- available information (e.g., past exposure monitoring records for similar circumstances; information in Tables 2, 3 and 4 in this leaflet; HSG189/1 and HSG189/2);
- past experience and knowledge which are relevant to the work in question; and
- an allowance for short-term unexpected high exposures.

But, where there is doubt about the expected exposure concentration, you will have to confirm the concentration by air monitoring, using a method approved by the Health and Safety Commission (e.g., methodology described in HSE Guidance Note EH10 and MDHS39/4). If you are not sure that you can properly assess your employees’ expected exposure to asbestos fibres, then get help from an occupational hygienist or a specialist laboratory. To carry out asbestos-related sampling and analysis, laboratories must be accredited by the UK Accreditation Service (UKAS). Where you have to confirm or
reassess likely exposure concentration in air by personal exposure monitoring, until such information is available you will need to provide suitable RPE which can provide the best possible protection.

Tables 2, 3 and 4 give you information on the sort of fibre concentrations you are likely to experience in a range of jobs. They are only a guide and are no substitute for carrying out a proper assessment of the likely exposure concentrations. The circumstances of each job can vary widely, so you must carry out a proper assessment.

<table>
<thead>
<tr>
<th>Job</th>
<th>Likely fibre concentrations (fibre/ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine sawing with exhaust ventilation (LEV)</td>
<td>up to 2</td>
</tr>
<tr>
<td>Machine drilling AC with LEV</td>
<td>up to 1</td>
</tr>
<tr>
<td>Hand sawing AC with LEV</td>
<td>up to 1</td>
</tr>
<tr>
<td>Machine cutting AC without exhaust ventilation</td>
<td>up to 25</td>
</tr>
</tbody>
</table>
### TABLE 3 - Work with asbestos insulating board (AIB) containing amosite (brown) asbestos

<table>
<thead>
<tr>
<th>Job</th>
<th>Likely fibre concentrations (fibre/ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Careful removal of whole asbestos insulating board (AIB)</td>
<td>up to 3</td>
</tr>
<tr>
<td>Breaking and ripping out AIB - if this is absolutely necessary it should be done with great care and only inside an enclosure</td>
<td>5 to 20</td>
</tr>
<tr>
<td>Drilling AIB with vacuum trace - local exhaust ventilation (LEV), or shadow vacuuming</td>
<td>up to 1</td>
</tr>
<tr>
<td>Drilling AIB without vacuum trace</td>
<td>up to 10</td>
</tr>
<tr>
<td>Reciprocating power sawing AIB</td>
<td>up to 20</td>
</tr>
<tr>
<td>Hand sawing AIB</td>
<td>5 to 10</td>
</tr>
</tbody>
</table>

Work with asbestos insulating board, coating and lagging (with very few specific exceptions) must be carried out by a licensed contractor. Table 4 gives typical fibre concentrations for well conducted stripping methods as well as unsatisfactory situations. Anything less than the well conducted methods is unacceptable and will lead to higher fibre concentrations.

During controlled wet stripping operations, parts of the lagging or coating might not be thoroughly wetted or a piece of lagging can come loose or drop off before you wet it. If this happens, you should take appropriate action before allowing the work to continue. If you ignore the situation, fibre concentrations can
soar, in some cases, to above 1000 fibres/ml, which is far higher than commercially available RPE can protect against. Remember, you have legal duties to reduce the exposure to asbestos fibres as low as possible.

**TABLE 4 - Work with asbestos coating and lagging**

<table>
<thead>
<tr>
<th>Job</th>
<th>Likely fibre concentrations (fibre/ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well-conducted controlled wet stripping using manual tools</td>
<td>up to 1 (unless a dry patch is hit or lagging becomes detached)</td>
</tr>
<tr>
<td>Well-conducted controlled wet stripping using power tools</td>
<td>up to 10 (unless a dry patch is hit or lagging becomes detached)</td>
</tr>
<tr>
<td>Well-conducted grit blasting only as a final clean-up method</td>
<td>up to 10</td>
</tr>
<tr>
<td>Well-conducted grit blasting only as a final clean-up method after</td>
<td></td>
</tr>
<tr>
<td>most of the coating or lagging has already been removed. This is not</td>
<td></td>
</tr>
<tr>
<td>an acceptable method of initial removal of asbestos</td>
<td></td>
</tr>
<tr>
<td>Stripping pipe or vessel lagging - partially wetted or dry areas</td>
<td>up to 100</td>
</tr>
<tr>
<td>present</td>
<td></td>
</tr>
<tr>
<td>Stripping sprayed coatings - partially wetted or dry areas present</td>
<td>around 1000</td>
</tr>
</tbody>
</table>
Protection factors

Based on the outcome of your assessment, you will have to select suitable RPE. Remember, the concentration inside the facepiece of the RPE must be as low as possible and in any case must not exceed the relevant control limit.

Tables 5 and 6 provide a selection of RPE. You should start with the RPE which has the highest protection factor (PF). Then consider whether this RPE is suited to the nature of the job, work-related factors, wearer’s facial characteristics, medical fitness and comfort. Using this process, select the most suitable type of RPE for the job (see Table 7). You should also consider whether the chosen RPE will be adequate for any unexpected short-term high exposures. You must record the reasons for selecting a particular type of RPE in your risk assessment.

<table>
<thead>
<tr>
<th>PF</th>
<th>Filtering half mask EN 149</th>
<th>Valved filtering half mask EN 405</th>
<th>Filtering half masks without inhalation valves EN 1827</th>
<th>Half mask EN 140 and filter EN 143</th>
<th>Full-face mask EN 136 and filter EN 143</th>
<th>Powered hoods and filter EN 146 EN 12941</th>
<th>Power-assisted masks and filter EN 147 EN 12942</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>FF P3</td>
<td>FF P3</td>
<td>FM P3</td>
<td>Mask + P3</td>
<td>—</td>
<td>TH2 all types of facepieces + P3</td>
<td>TM2 all types of facepieces + P3</td>
</tr>
<tr>
<td>40</td>
<td></td>
<td></td>
<td>Mask + P3</td>
<td></td>
<td>TH3 hoods, blouses + P3</td>
<td>TM3 full-face mask + P3</td>
<td></td>
</tr>
</tbody>
</table>

| TABLE 5 - Respirator selection chart for protection against asbestos in air |
## TABLE 6 - Breathing apparatus selection chart for protection against asbestos in air

<table>
<thead>
<tr>
<th>PF</th>
<th>Fresh-air hose BA EN 138/269</th>
<th>Light-duty compressed airline BA masks EN 12419</th>
<th>Light-duty compressed airline BA hoods, helmets, visors EN 1835</th>
<th>Constant flow compressed airline BA hood EN 270/271 Mask EN 139</th>
<th>Demand flow compressed airline BA mask EN 139</th>
<th>Self-contained BA (SCBA) EN 137</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>LDM1</td>
<td>LDH2</td>
<td>Half mask</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>Full-face mask Hood</td>
<td>LDH3</td>
<td>Hood Blasting helmet</td>
<td>Negative demand full-face mask</td>
<td>Negative demand full-face mask</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>LDM3</td>
<td>Full-face mask</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>Suit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td>Positive demand full-face mask</td>
<td>Positive demand full-face mask</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**TABLE 7 - Worked example**

**Work:**
Removal of asbestos insulation from a boiler house.

**Type of asbestos:**
Representative samples taken from the lagging to be removed and the occupier's documentation about it indicate that the lagging contains chrysotile (white asbestos) only.

**Control limits:**
0.3 f/ml for 4-hour TWA and 0.9 f/ml for 10-min TWA as prescribed in the Control of Asbestos at Work Regulations 2002.

**Proposed type of removal:**
Well-conducted, controlled wet stripping using manual tools. Representative core samples taken after the wetting process at an earlier job indicated that it is unlikely to hit a dry patch. Same procedure will be conducted to ensure similar situation in this work. Wetting to be done using injection needles, wetting agents and water.

**Amount to be removed:**
Eight square metres of asbestos-containing lagging material.

**Likely residual fibre concentration in air:**
Up to 1 f/ml (Table 4) and this figure agrees with the exposure monitoring results obtained during similar work last month.

**Work activity:**
Have to work around and in between pipes. Removal workers will have to pass in between pipes and girders (both vertically and sideways). Adequate time and person resources have been planned in for stripping, cleaning and decontamination activities. The effort required - moderate work. Working on a cold plant. The work environment is not a confined space and will contain normal levels of oxygen. No need to use solvents, glues etc.

**RPE wearers:**
Clean shaven except for one person who has beard; no unusual facial marks; no spectacle wearers.

**Other PPE:**
Suitable and adequate coverall to protect against asbestos penetration. Gloves and safety boots in accordance with risk assessment requirements.

**Protection required:**
Minimum protection required from suitable RPE to reduce exposures to the control limit of $1/0.3 = 3.3$ (i.e., likely residual fibre concentration in air divided by 4-hour TWA control limit). This calculation indicates that it would be possible to use devices with a PF of 4. However, the law requires that inhalation exposure to asbestos fibres is reduced to the lowest level reasonably practicable. Therefore, it is necessary to consider devices which could offer the best possible protection.
SELECTION OF SUITABLE RESPIRATORY PROTECTIVE EQUIPMENT FOR WORK WITH ASBESTOS

Selection of suitable RPE: From Table 6 - Types of RPE which offer highest PF (2000) are self-contained breathing apparatus (SCBA) with positive-demand full-face mask and compressed airline breathing apparatus (CABA) with positive-demand full-face mask.

(i) SCBA is not suitable because it will not last for more than 15 minutes of actual stripping work. Safe usable time for SCBA will include time required for decontamination and exit to a safe area. SCBA would be too bulky to use in the likely restricted space; it will introduce unnecessary strain on the wearer and may cause other safety-related accidents.

(ii) It is not reasonably practicable to use CABA because air supply hoses can become entangled during use. This may introduce tripping hazards and may present considerable secondary exposure problems during disconnection to enter the decontamination area. During the decontamination of hoses, asbestos on hose protective coverings may contaminate the decontamination area. For these reasons it is considered that CABA is not suitable for the work to be undertaken.

(iii) The next choice of device is respirators. Respirators with the highest PFs (Table 5) are unpowered full-face mask with P3 filter(s), TH3 powered hoods and TM3 power-assisted devices with full-face masks and P3 filter(s). An unpowered device would be uncomfortable and would place demand on the user’s lungs when compared to a powered device. So a TM3 power-assisted respirator with full-face mask and P3 filter(s) would be the choice for those without beards. This RPE, when used in conjunction with a suitable RPE programme, should reduce the exposure concentration to at least 0.02 f/ml. This concentration is near the clearance level.

(iv) All our wearers, except the person with the beard, were fit tested for a power-assisted respirator with full-face mask (TM3) - model 123 made by ZZ Ltd. In this work situation, the person with the beard could be provided with a TH3 powered hood. If the power to the device fails completely during use, the wearer should be able to exit the work area quickly and without significant danger to life or health.
Facepiece fit testing

People come in all sorts of shapes and sizes. Therefore, one particular size or type of RPE is unlikely to suit everyone. In addition, the performance of facepieces (eg filtering facepieces, half- and full-face masks) depends on achieving a good contact between the wearer’s skin and the face seal of the mask. To make sure that the selected facepiece can provide adequate protection for the wearer, the initial selection should include fit testing. For full face masks, a suitable quantitative fit test should be used. For devices such as filtering facepieces and half-masks a suitable and validated qualitative method can be used. More detailed explanation and guidance can be obtained from www.hse.gov.uk/pubns/asbestos.pdf.

Both types of fit testing can provide an assessment of the quality of fit between the person and the facepiece worn. However, this can only provide an indication of the effectiveness of the face seal on the day in question. The competent person carrying out the test will be aware of the limitations of the method being used and will assess the results. He or she will then tell you whether the fit obtained is satisfactory or not. In order to obtain an adequate performance at the workplace, the chosen RPE should be worn correctly every time. The expected level of workplace protection provided by suitable RPE is shown by the PF values in Tables 5 and 6.
Repeat facepiece fit testing will be needed if changing to a different model of RPE or different-sized facepiece or if there have been significant changes to the facial characteristics of the wearer (eg loss or gain in weight).

And remember that beards, sideburns or even a visible growth of stubble or wearing glasses will affect the face seal of tight fitting face masks, which rely on a close contact between face and mask. For these workers you should provide suitable RPE which does not rely on a good face seal for protection, eg powered/air-supplied hoods and powered/air-supplied blouses. For those wearing glasses, full-face masks which allow the fixing of special frames inside the mask may be considered.

Consulting employees

You will need to involve the wearers of RPE in the selection process and, where practicable, provide them with a choice of suitable equipment. This helps to ensure that it is suited to them and increases the chances that they will accept the RPE and wear it correctly.

You must consult safety representatives appointed by recognised Trade Unions under the Safety Representatives and Safety Committee Regulations 1977. Other employees not covered by such representatives must be consulted, either directly or indirectly via elected representatives of employee
safety, according to the Health and Safety (Consultation with Employees) Regulations 1996. This will allow employees or their representatives to help you develop suitable and adequate control measures.

Looking after RPE

Check that the RPE is clean and in good working order before you give it to the wearer, and before it goes back into storage. Badly maintained RPE will not provide adequate protection and the wearer’s health will be put at risk. Before use, you should, where appropriate, check on:

- the condition of the head harness, and the facepiece including seal and visor;
- the condition of the inhalation and exhalation valves, where fitted. For example, dirty, curled-up or cracked valves will not perform properly and will severely compromise the protection provided;
- the condition of any threaded connectors and seals;
- the condition and type of filter(s), that they are ‘in-date’ and fitted properly;
- the airflow rate for power-assisted and powered respirators compared with the manufacturer’s specification;
- whether the RPE is complete and correctly assembled; and
- additional tests in accordance with the manufacturer’s instructions.
If you are providing breathing apparatus, check the flow rate and pressure of the air supply at the start and end of each shift. Also, ask wearers to check these at regular intervals during the shift. For all RPE, carry out additional tests or observations in accordance with the manufacturer’s instructions.

The manufacturer of RPE should give you instructions on cleaning and maintenance. Make sure you follow them. After each use, RPE (except the disposable type) should be decontaminated, cleaned, disinfected and placed in storage specifically provided for that purpose.

All RPE should be thoroughly examined and tested, by trained personnel, at least once a month to make sure that it is working properly to its design specification. A record of inspection, examination, maintenance and defects remedied must be kept available for inspection by the enforcing authorities and others for five years.

Do not modify any form of RPE without the knowledge and consent of the manufacturer.

Training your employees, including supervisors

Make sure your employees understand:

- the risks to their health of breathing in asbestos fibres and the increased risk of smoking and working with asbestos;
how to fit and use the RPE correctly;

- why they must wear the RPE correctly and the importance of fit testing for the initial selection of suitable equipment and fit-checking each time it is worn;

- why they should never take off and/or put down RPE in a contaminated area, except in a medical emergency;

- how to recognise a reduction in air flow and what to do if it happens;

- why a particular type of RPE has been selected, and what it can and cannot do;

- the manufacturer’s instructions on the use and maintenance of the equipment;

- how to clean and decontaminate themselves and how to clean contaminated RPE when leaving the work area; and

- when not in use, where and how to store the RPE.

Give employees regular refresher training (at least once a year) on the use of RPE. Don’t assume that, because your workers have worn RPE before, they will always use it properly.

Supervision

The best way of making sure that your workers use their RPE properly is to provide competent supervision. For instance, the supervisor must make sure that wearers never:
- misuse equipment (examples of misuse are listed below); or
- remove their RPE in a contaminated area - not even for a moment, except in an emergency (eg medical, accidental damage to RPE).

It’s a good idea to encourage supervisors and wearers to check that the RPE is in good working order (before wearing it) and that it is being worn correctly.

Some common misuses of RPE when working with asbestos

Examples given below indicate some of the very serious misuses of RPE. Misuses of this kind will always result in reduced protection and unnecessary, but preventable, exposures to asbestos fibres. These misuses invalidate the suitability of RPE and constitute a failure to comply with the Control of Asbestos at Work Regulations 2002.

All types of RPE

- Wearing of disposable respirators, half- and full-face masks by people with beards and/or thick sideburns or stubble growth which prevents an adequate seal being achieved.
- Wearing goggles which are not suitable for use with the disposable respirator or a half-mask. Unsuitable goggles will prevent an adequate seal being achieved.
Failing to ensure that the RPE fits the wearer.
Working in a contaminated area while the respirator is left hanging around the neck.

Disposable respirators

- Wearing the respirator upside down.
- Failing to adjust the nose clip to obtain a good face fit and face seal.
- Removing the lower strap or not using it to fit the mask properly.

RPE with full-face masks

- Cutting off part of the face seal to make it more comfortable to wear.
- Loosening or failing to adequately tighten all the head harness straps.
- Wearing ordinary spectacles with a full-face mask. There are special frames which can be fitted to the mask which do not interfere with the face seal.
- Wearing the head harness over the hood of the coverall. This can cause slippage of the mask and loss of the face seal.
- Failing to ensure that the correct filter is fitted in the filter housing, or that seals/O-rings are in place and correctly seated.
Failing to ensure that filters are present in their housing.

Failing to tighten the breathing hose to the face mask and filter housing.

Failing to properly maintain the RPE (eg asbestos contamination inside the mask, filter housing etc; fitting a battery which is not fully charged; fitting the visor to the mask the wrong way round).

Failing to replace worn and distorted masks.

Failing to test the voltage and capacity of batteries, and to replace inadequate ones.

Further information

You will find the following publications helpful if you need more information on the regulations which cover work with asbestos and the working practices you need to adopt to protect the health of your employees.


Work with asbestos which does not normally require a licence. Control of Asbestos at Work Regulations 2002. Approved Code of Practice and guidance L27 (Fourth edition) HSE Books 2002 ISBN 0 7176 2562 1
Guidance for employers

Controlled asbestos stripping techniques for work requiring a licence
HSG189/1 HSE Books 1999 ISBN 0 7176 1666 5

Working with asbestos cement  HSG189/2 HSE Books 1999
ISBN 0 7176 1667 3

Enclosures provided for work with asbestos insulation, coatings and insulating board Environmental Hygiene Guidance Note EH51 HSE Books 1989 ISBN 0 7176 1700 9

The provision, use and maintenance of hygiene facilities for work with asbestos insulation, asbestos coating and asbestos insulating board Environmental Hygiene Guidance Note EH47 (Third edition) HSE Books 2002 ISBN 0 7176 2299 1


Respiratory protective equipment: Legislative requirements and lists of approved standards and type approved equipment (Fourth edition) HSE Books 1995 ISBN 0 7176 1036 5

Asbestos: Exposure limits and measurement of airborne dust concentrations Environmental Hygiene Guidance Note EH10 (Seventh edition) HSE Books 2001 ISBN 0 7176 2129 4

Asbestos fibres in air: Sampling and evaluation by Phase Contrast Microscopy (PCM) under the Control of Asbestos at Work Regulations MDHS 39/4 (Fourth edition) HSE Books 1995 ISBN 0 7176 1113 2

Guidance for employees

Asbestos alert for building maintenance, repair and refurbishment workers: Be aware of asbestos the hidden killer Pocket card INDG188 HSE Books 1995 (single copy free or priced packs of 25 ISBN 0 7176 1209 0)

Working with asbestos in buildings Leaflet INDG289 HSE Books 1999 (single copy free or priced packs of 10 ISBN 0 7176 1697 5)
Asbestos dust kills - keep your mask on: Guidance for employees on wearing respiratory protective equipment for work with asbestos
Leaflet INDG255(rev1) HSE Books 1999 (single copy free or priced packs of 20 ISBN 0 7176 1696 7)

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0 7176 2563 X  Work with asbestos insulation, asbestos coating and asbestos insulating board  £9.50  £
0 7176 1667 3  Controlled asbestos stripping techniques for work requiring a licence  £7.50  £
0 7176 2456 0  Selection of suitable respiratory protective equipment for work with asbestos (pack of 5)  £5.00  £

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