

# Asbestos Removal Worker

## HAZARDS AND RISKS

Work with Asbestos or Asbestos Containing Materials (ACMs) is defined as high or low risk depending on (1) the types of asbestos containing material (asbestos insulation board, sprayed coatings etc.) and (2) the work process e.g., demolition, renovation and/or maintenance. High risk work involving asbestos is required to be notified to the Health and Safety Authority a minimum of 14 days prior to commencement of work.

### Asbestos

Asbestos is classified as a category 1 carcinogen meaning that it is a definite cause of cancer. It is estimated that asbestos causes the death of over 90,000 people in the EU each year. When materials that contain asbestos are disturbed or damaged, fibres are released into the air which, when inhaled, can cause mesothelioma, asbestos-related lung cancer, asbestosis, and pleural thickening - all fatal or serious and incurable diseases which take many years to manifest. The WHO\* and the ILO\* estimate that approximately 400 people die annually in Ireland from occupational exposure to asbestos.

In Ireland, asbestos products have been gradually replaced or substituted since the early 1990s. This change occurred on a voluntary basis prior to the formal ban in the year 2000. While it is now prohibited to use asbestos, materials containing asbestos which were already installed or in service prior to the prohibition remain in place. As a result, there is still potential for exposure to asbestos in a variety of workplaces including the construction sector.

## CONTROL OPTIONS

### Enclosures

- Most notifiable work will normally require an enclosure that is maintained under negative pressure and connected to a decontamination unit (DCU) by an airlock system. Refer to the HSA's [Asbestos-containing Materials \(ACMs\) in Workplaces - Practical Guidelines on ACM Management and Abatement \(2013\)](#) for further guidance on the prevention of illness from exposure to respirable asbestos fibres in workplaces.

### PPE

- For work inside enclosures, power-assisted full-facepiece respirators fitted with P3 filters (or higher performance equipment, e.g. breathing apparatus) should be worn.
- Disposable respiratory protective equipment (RPE) with FFP3 rated protection, or half-mask RPE (with P3 filters) can be used for low-risk ancillary tasks.
- Type 5, category 3 disposable coveralls should be worn.

### Safe & controlled working methods

- Prior to the commencement of works a survey should be completed identifying the types, condition and location of ACMs.
- Complete an asbestos risk assessment and identify safe ways of working.
- Control asbestos dust at source using local exhaust ventilation (LEV) or controlled wetting techniques such as airless or low-pressure spraying (use dielectric fluids on/near electrical equipment).
- Avoid dry asbestos stripping techniques. Otherwise, control asbestos fibre release by methods such as the use of "glovebags", or vacuum transfer of ACMs.
- Choose methods that avoid abrasion, sanding, machining or cutting of ACMs - i.e., remove an item intact instead of breaking it, or wrap and cut off insulated pipes at flange joints rather than disturb the insulation.

### Decontamination units (DCUs)

- Provision of a DCU to prevent the spread of asbestos fibres from the enclosure is essential for all high-risk asbestos work. The DCU should be on site before any work starts and be the last thing to leave site at the end of the job. DCUs can be mobile, modular or vehicular.

### Controlled working procedures

- Comply with the decontamination procedures set out in the above guide.
- Remove ACMs before major work (such as refurbishment) begins.
- Pre-clean the work area and thereafter clear up at regular intervals, using vacuum-cleaning equipment of class H.
- Ensure asbestos waste is safely and regularly disposed of from site.
- Re-route cables away from ACMs and protect ACMs from damage if working nearby.
- Minimise the number of site staff who might be exposed to asbestos during the work.

## MANAGING THE RISK

The appropriate enforcing authority (the HSA) must be notified at least 14 days before each job involving high-risk work. A plan of work - explaining what the job involves, the work procedures, and what controls to use - must have been prepared by the time of notification. All asbestos work must comply with the Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations, 2006-2010.

### Supervision

Strong supervision to ensure compliance with all work procedures, including decontamination, is required to ensure workers do not develop poor practices or become complacent.

### Air monitoring

Air monitoring, carried out by an independent competent analyst, is required where the exposure limit value is/may be exceeded. Employers must obtain 'Site clearance for reoccupation' certificates in writing following asbestos removal activities and prior to employee re-entry. Air monitoring is required to confirm that the enclosure, airlocks and LEV equipment are working effectively.

### Maintenance & testing of controls

RPE should be inspected prior to use. Reusable RPE must be thoroughly examined and tested every month. All RPE wearers should be subject to RPE face fit testing. The LEV systems must be thoroughly examined and tested at least every six months by a trained and competent person. A thorough visual inspection of enclosures is required at the start of each shift. Enclosure testing, with smoke tracers or differential pressure monitors, is required at frequent intervals (daily where the enclosure is located in an occupied building).

### Health surveillance

Employees must be subject to regular medical surveillance for as long as they are at risk of exposure to asbestos.

### Training requirements

Asbestos workers must not start work without having received the appropriate level of training, including practical training in decontamination procedures, RPE fit testing and maintenance, effective work techniques, construction of enclosures and airlocks, and the maintenance of plant and equipment. Workers should understand the health hazards and their likely exposure risks. A training strategy must be in place.

\*The WHO is the World Health Organisation, and the ILO is the International Labour Organisation. They are both United Nations agencies.

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## OCCUPATIONAL EXPOSURE LIMIT VALUES (OELVs) & EXPOSURE LEVELS

Agent or substance	Control/Exposure Limit	Comments
Asbestos	0.1 fibres per millilitre of air (0.1 f/cm <sup>3</sup> ) (8-hour reference period)	This control limit is not a 'safe' Asbestos level and exposure must be reduced to as far below the control limit as possible. OELVs are regularly reviewed. Refer to the current Code of Practice for up-to-date information.  High-risk work is that which will result in exposures above the control limit, or all work with sprayed asbestos coating, work disturbing pipe lagging, work on asbestos millboard, clean-up of ACM debris, or work on loose fill asbestos insulation or AIB where the work is not "sporadic and of low intensity" and not of short duration.

## GUIDANCE EXPOSURE LEVELS FOR WELL/POORLY CONTROLLED ASBESTOS REMOVAL WORK

WELL CONTROLLED WORK WITH ACMs	
Job	Likely fibre concentrations (f/cm <sup>3</sup> )
Controlled wet stripping using manual tools	up to 1 (unless a dry patch is hit, or lagging becomes detached)
Careful removal of whole AIB	up to 3
Drilling AIB with vacuum	up to 1

POORLY CONTROLLED WORK WITH ACMs	
Job	Likely fibre concentrations (f/cm <sup>3</sup> )
Stripping pipe or vessel lagging – partially wetted or dry areas present	up to 100
Stripping sprayed coatings – partially wetter or dry areas present	around 1000
Drilling AIB without vacuum	up to 10

### Further information

Asbestos Containing Materials (ACMs) in Workplaces. Practical Guidelines on ACM Management and Abatement (2013). Health and Safety Authority, Dublin.

Safety, Health and Welfare at Work (Exposure to Asbestos) Regulations, 2006 – 2010. S.I. No. 386/2006, as amended 2010.

Current Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 as amended and the Safety, Health and Welfare at Work (Carcinogens, Mutagens and Reprotoxic substances) Regulations, 2024.