Safety Services Guidance

Asbestos in Equipment

Key word(s):	Asbestos, asbestos containing material (ACM), work equipment, ovens, gaskets,
Target audience:	PIs, safety advisors, staff

Contents

Management cycle	Useful paragraphs
Plan	3-4, 8-10, 17
Do	5-6, 11-16
Monitor	
Review	

Introduction

1. This guidance relates to asbestos in work equipment only, where responsibility for the equipment lies with the school or directorate owning the equipment. It includes information and guidance on where asbestos might be found in equipment, how to dispose of it safely and in accordance with the strict legal requirements that exist for this substance.

2. Estates & Facilities have an asbestos management team, an asbestos management plan, procedures and information manual which apply to all aspects of controlling asbestos where it has been used as a building material or finish. No such work should take place without involving Estates personnel.
See http://www.estates.manchester.ac.uk/services/psu/services/asbestos-management/ and EPM HS25 Asbestos Management Plan.

Arrangements

3. If equipment is suspected or known to contain asbestos, any work such as dismantling, servicing, replacement of parts or disposal should not be attempted until advice has been sought from Safety Services or the Asbestos Team, and a risk assessment drawn up. It will be necessary to take steps to prevent exposure to dust. An ordinary "nuisance" dust mask is NOT suitable protection. In cases of doubt, in the short term it is necessary to presume that asbestos is present and to take suitable precautions. Depending on the circumstances, it may be appropriate to continue with this presumption and dispose of the item as asbestos contaminated waste. However, the school may choose to contact an occupational hygienist to take a sample, and identify exactly what the material is. This will be the financial responsibility of the school. The Asbestos Team have a framework of accredited occupational hygienists, and schools should select a contractor from their approved list.

4. If equipment is suspected or known to contain asbestos but there is no intention of exposing or disturbing fibres, appropriate labels should be provided to help prevent inadvertent exposures at a later date. All those likely to use the equipment should be informed of the (suspected) location and condition of the asbestos containing material (ACM).

Responsibilities

5. All individual members of staff and students have responsibility for noting the presence of warning signs on or inside equipment, for not proceeding to disturb any ACMs or suspected ACMs, and for informing the local Safety Advisor without

delay if disturbance occurs accidentally. The local School Safety Advisor should contact the University Asbestos Manager for advice in the first instance.

6. Safety Services will provide assistance and advice on surveying, sampling, containment and disposal if the University Asbestos Manager is not available. Contact your University Safety Co-ordinator or the Safety Office (details at http://www.healthandsafety.manchester.ac.uk/aboutus/contactus/)

7. NOTE: Estates retain responsibility for all matters to do with ACMs in or on building structures and finishes. It is therefore essential that all works on building structures and finishes are notified to them, and co-ordinated through them, and that their policy and procedures documents are complied with. (If asbestos is subsequently discovered and the Estates asbestos management arrangements have not been used, insurance cover may be compromised.)

Background information on asbestos

8. Asbestos has many useful properties. It is effective as an electrical and acoustic insulator, and is resistant to heat and chemical attack. As a result, ACMs were widely used in buildings and equipment to provide fire and noise insulation particularly during the 1960s and 1970s. As the effects on health of asbestos dust became more evident, the importation, sale and use of crocidolite (blue), amosite (brown) and chrysotile (white) asbestos have been progressively restricted, and all new uses and importation are prohibited.

9. There are extensive legal provisions for controlling exposure to asbestos dust at work (see references at the end of this guidance note). For most activities, it is a legal requirement to use a contractor licensed by the Health & Safety Executive, and to notify the HSE 14 days in advance of any removal or encapsulation work. All schools/Institutes must seek advice from Safety Services or the Asbestos Team about the implications of **any** work with asbestos. The Asbestos Team and Estates & Facilities have adopted a policy that all asbestos work is carried out by licensed contractors. The legal exceptions are few, and complex to understand and adhere to. Schools are unlikely to have sufficient in-house expertise to comply with the legal requirements. It may be possible, however, to remove and dispose of small sections of undamaged ACMs encased inside redundant equipment, provided they can be accessed and handled without disturbance of the ACM or any other activity likely to cause dust or break the surface.

Where asbestos might be found in equipment

10. This is not an exhaustive list, and the presence of ACMs should be suspected in any location where its physical properties would be an advantage. The age of equipment is not a reliable guide, although generally speaking, equipment

assembled after 1985 is unlikely to contain blue or brown asbestos. Some products containing chrysotile were prohibited in 1993, but a comprehensive prohibition was not enacted until 1999. Typical applications include:

- lagging, tapes, rope, corrugated paper, quilts, felts and blankets used as thermal insulation of pipes, boilers, pressure vessels, calorifiers, etc
- millboard used for heat insulation and fire protection in switchgear
- insulation board, generally used in building materials but also in acoustic attenuators
- paper, felt and cardboard for electrical / heat insulation of electrical equipment, wiring etc., or acoustic linings in air handling equipment; duct and pipe insulation
- ropes and yarns used as lagging, jointing, packing materials for heat resistance or fire protection, plaited tubing in some electrical cable
- cloth used as thermal insulation and lagging, including blankets, mattresses, protective curtains, gloves, aprons, overalls (sometimes aluminised to reflect heat)
- gaskets and washers
- strings e.g. for sealing hot water radiators
- friction products e.g. resin-based materials used in brakes and clutch plates
- drive belts and conveyor belts
- fully compressed flat sheet e.g. laboratory worktops
- reinforced plastic or resin composites e.g. laboratory worktops
- cement products in flue pipes, extractor hoods
- bituminous products e.g. used in underseals
- heat resistant mats (as used under Bunsen burners)
- tripod gauzes
- tripod diffusers/ crucible holders
- isomantles
- heat resistant/fire blankets
- gloves which may have asbestos lining

What to do if asbestos is found in equipment

11. If a very small amount of dust (which is, or is presumed to be asbestos) has been disturbed, or an unsealed surface revealed, it may be possible to deal with it using simple methods, or to seal the exposed surface to prevent more widespread

distribution of fibres. This should only be attempted on the advice of a member of the Estates & Facilities Asbestos Team, and only if it can be done without causing the fibres to become airborne. Contaminated materials should be double bagged and disposed of as asbestos waste.

12. In limited circumstances, it may be possible to remove whole, undamaged sections of ACM carefully. These should be placed in a suitable, red, plastic bag, which should be sealed, and placed inside a second, clear, plastic bag, which should also be sealed prior to disposal as detailed below.[1]

13. If equipment is to be disposed of, the asbestos must be removed by a licensed contractor beforehand. Details are available from the Estates & Facilities Asbestos Manager.

14. In all other circumstances, it will be necessary to obtain the services of a licensed asbestos removal contractor. Details of licensed contractors used by the University are available from the Asbestos Team.

15. If ACMs are discovered unexpectedly, for example during equipment maintenance or strip down procedures, the activity should cease until a risk assessment has been carried out. Any area affected by dust or debris should be cordoned off to prevent anyone approaching. If possible, steps should be taken to reduce air disturbance, e.g. by switching off general ventilation, closing doors, etc. Local extraction could be isolated *if it is safe to do so* and this does not introduce a greater risk from the chemical(s) being extracted. The dust must NOT be vacuumed or brushed up. Further advice should be sought (from the Estates & Facilities Asbestos Manager or Safety Services).

16. Disposal of waste containing or contaminated by asbestos is strictly regulated. It must be "double bagged", firstly in a red plastic bag then in an outer clear bag, both marked with the asbestos warning sign. Both bags must be well sealed, kept secure, and kept separate from other general waste streams until it can be collected by a licensed contractor and taken to a site licensed to take asbestos waste. As the University makes frequent use of licensed removal contractors, it should be possible to arrange for small quantities to be collected by them whilst they are on site, without undue delay. This should be done by contacting the Asbestos Team.

Concerns about inadvertent exposure

17. If this guidance is followed, significant inadvertent exposures should be avoided. However, if someone is exposed to asbestos dust, or suspects that they might

[1] HSE guidance on disposing of waste is at http://www.hse.gov.uk/pubns/guidance/em9.pdf

have been, an incident report must be completed and sent to Safety Services. In some cases, it may be necessary to investigate the extent of (suspected) exposure and record this on the person's medical record. The individual will be kept fully informed and should be advised to contact Occupational Health.

Training requirements

18. Those who work with equipment containing asbestos should receive appropriate awareness training before commencing work.

Bibliography

The Control of Asbestos Regulations 2012 – (SI 2012/632)

Control of Asbestos Regulations 2012. Approved Code of Practice and Guidance, L143 second edition, 2013, ISBN 9780717666188

An extensive list of current HSE advisory documents is at http://www.hse.gov.uk/asbestos/index.htm

Fibrous materials in the environment – a review of asbestos and man-made mineral fibres, MRC Institute for Environment and Health / BRE, 1997 (available from Safety Services)

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