Asbestos in Bunsen Burner Gauze Mats

The Heads of Workplace Safety Authorities Imported Materials with Asbestos Working Group has issued this safety alert regarding asbestos found in Bunsen Burner Gauze mats that have been imported into Australia.

Purpose

This safety alert provides information about Bunsen burner gauze mats which have been identified as containing asbestos. The circular ceramic material in the centre of the gauzes is used for its heat-resistant properties. The gauzes with ceramic centre are conventionally used with tripods and Bunsen burners as shown in Figures 1 and 2.

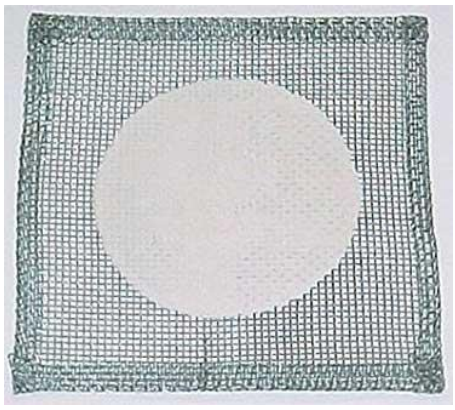

Figure 1: Gauze mat with ceramic centre (ref: Worksafe New Zealand)

Figure 2: Gauze mat sitting on tripod over Bunsen burner. (Ref: Health and Safety Executive, United Kingdom

Background

Tremolite asbestos has been identified in the ceramic centre of some Bunsen burner gauze mats in New Zealand and the United Kingdom. Preliminary testing has indicated that some gauze mats may have been imported into Australia. Further testing is underway to confirm this.

Gauze mats which do not have a ceramic centre are of no risk for asbestos.

As these gauze mats have been imported and supplied within Australia, the Rapid Response Protocol (RRP) has been initiated and steps taken to prevent further supply by identified suppliers. More information on the RRP and importation standards is available at the Commonwealth Asbestos Safety and Eradication Agency (ASEA) website.

Work health and safety laws

Work health and safety (or Occupational Health and Safety) laws place duties on persons conducting a business or undertaking (PCBU) or the employer to manage the risk of asbestos containing material (ACM). The work health and safety laws also place duties on importers and suppliers to ensure that imported products, plant, structures or substances do not contain

asbestos. Suppliers and importers must carry out or arrange tests and examinations to be able to prove these things do not contain asbestos.

Risk

Preliminary analysis of the ceramic material from some gauze mats identified fibres of tremolite asbestos. The fibres are bonded to the ceramic material. Any risk from asbestos depends on the extent of asbestos fibre release and inhalation of these fibres.

The risk of asbestos exposure from the ceramic material will generally be extremely low when the mats are used under normal conditions, for several reasons including the following:

- the material is predominantly non-asbestos
- there is very limited physical contact with the material during use (e.g. essentially placing items on top)
- any contact is light and momentary
- the ceramic material is hard and fibres are bonded to the ceramic material.

However, if the ceramic material becomes soft and crumbly, or is damaged, the slight risk of exposure may increase.

Recommended actions

Under state and territory work health and safety laws, a PCBU (or employer) must not use or allow a gauze mat to be used if it contains asbestos.

1. Isolate current stock

It is recommended that users adopt a precautionary approach as the gauze mats containing asbestos cannot be easily identified visually, from those that do not. Users should not handle, use or move their current stock of gauze mats until they have checked with their supplier to confirm if they are likely to contain asbestos.

2. Obtain test data or assume asbestos is present

The supplier should be able to provide accredited analysis/ testing information that confirms no asbestos content in the mats (for information on ‘asbestos-free’ vs no asbestos content, see ASEA’s website here. If not, users should assume the gauze mats contain asbestos and either have them tested, or dispose of them as outlined below. (Further information on testing can be found on ASEA’s website.

3. Safely dispose of gauze mats containing or assumed to contain asbestos

The work to dispose of the gauze mats and waste items is a low-risk activity, but still needs precautions and controls in line with legal requirements. The work should only be done by people who are confident that they can follow the guidance below and have access to the right equipment. Alternatively, organisations may choose to engage a licensed asbestos removalist.

Further information on removal and licensed removalists can be found on your state/territory/commonwealth work health and safety regulator's website – see below.

As the asbestos fibres are bonded to the ceramic material, Personal Protective Equipment (PPE) is not usually required when handling the gauze mats. Users may wish to adopt a precautionary approach regarding the use of PPE and personal protective clothing.

When gauze mats with no asbestos are stored directly alongside mats that contain asbestos, they should be treated as contaminated waste. Other equipment (such as clay triangles, Bunsen burners etc.) which have been stored with contaminated gauze mats, and the storage area, should be wiped clean with a wet wipe if there is any visible dust present. The cloth should be disposed of as contaminated waste.

The gauze mats should be wetted using a hand-held spray bottle containing water with a small quantity of detergent (e.g. washing-up liquid or PVA glue) and handled carefully to prevent any further damage. The gauze mats should be contained for disposal by placing them in either:

- a rigid, sealable plastic container, which is then taped closed and labelled CAUTION – ASBESTOS WASTE; or
- a heavy-duty polythene waste bag which is then placed in a second bag (i.e. double bagged) and labelled CAUTION – ASBESTOS WASTE. Note – take care that the wire does not make holes in the bags.

Any excess water (from spray) and dust/debris from the gauze mats should be wiped up using an appropriate absorbent cleaning item, and be disposed of in the same manner as the gauze mats.

Once the immediate clean-up and containment has been completed, the waste must be taken to a landfill site licenced to accept asbestos waste. To find a disposal site near you, see ASEA's website here.

4. Ensure future purchases of gauze mats do not contain asbestos

Obtain analytical data from your supplier in relation to the batch of gauze mats you are purchasing. Ensure the analytical methods used are scoped to include detection of tremolite asbestos. For more information on testing methods, see ASEA's website here.

Testing requirements

The onus is on the importer and supplier to ensure materials they are importing and supplying do not contain asbestos. Users who have purchased gauze mats can reasonably expect the supplier to provide evidence that the mats do not contain asbestos. If sourcing replacement mats, you should seek confirmation from your suppliers that the supply chain is assured and that new mats do not contain any level of asbestos.

Heads of Workplace Safety Authorities
Australia and New Zealand

Testing for asbestos in gauze mats is achieved through laboratory testing. In Australia, samples are to be sent to a laboratory that is NATA accredited for the testing of asbestos.

The laboratory that undertakes the analysis will provide a certificate that:

- states no asbestos detected (NAD), or
- lists the type of asbestos detected, and/or
- states "unknown mineral fibres" present

NATA accredited testing only lists the 3 common types of asbestos (Chrysotile, Amosite and Crocidolite. Tremolite is one of them. If the test result states "unknown mineral fibres present" on the certificate, you can assume asbestos fibres are present and follow the below guidance.

If asbestos is detected, manage and remove as per Step 3 above
If unknown mineral fibres were identified you have two options:

- Manage the product as an asbestos containing material (see Step 3 above),

OR, if you need to definitely identify if the fibres are asbestos (and which type):

- Have the samples analysed using electron microscopy (that will characterise the morphology of unknown mineral fibres) or XRD analysis (that will determine the chemical composition of the unknown mineral fibres).

Further information on testing can be found on ASEA's website

If you're unsure, get advice

If you're unsure about what to do, contact your State/Territory/Commonwealth work health and safety regulator.

State/ Territory C'wealth	Regulator	Contact details	Website
ACT	Asbestos Awareness ACT Government	13 22 81	www.asbestos.act.gov.au/
C'wealth	Comcare	1300 366 979	www.comcare.gov.au/asbestos
NSW	SafeWork NSW	13 10 50	www.safework.nsw.gov.au/
NT	WorkSafe NT	1800 019 115	www.asbestos.nt.gov.au
QLD	Workplace Health and Safety Qld	1300 362 128	www.worksafe.qld.gov.au/
QLD	Qld Gov Asbestos page	13 74 68	www.deir.qld.gov.au/asbestos/
SA	SafeWork SA	1300 365 255	www.safework.sa.gov.au/
SA	SA Gov Asbestos page	1300 365 255	www.asbestos.sa.gov.au/
TAS	WorkSafe TAS	1300 366 322	www.worksafe.tas.gov.au
VIC	WorkSafe VIC	1800 136 089	www.worksafe.vic.gov.au/
VIC	Asbestos page	1800 136 089	www.asbestos.vic.gov.au/
WA	WorkSafe WA	1300 307 877	www.commerce.wa.gov.au/WorkSafe/