

ASBESTOS - hazards and safe practices for cleanup after Beirut blast



As a result of the cleanup operations after Beirut blast there may be an accumulation of asbestos-containing waste that will present a hazard to people in the local environment and those living in close proximity to the site of final disposal.

Asbestos is a group of naturally occurring fibrous minerals. Asbestos are non-biodegradable, have great tensile strength, conduct heat poorly and are relatively resistant to chemical attack. For these reasons, asbestos is used in building and insulation materials, including boilers and heating vessels; cement pipe and water supply lines; clutch, brake and pads for automobiles; conduits for electrical wire; pipe covering; roofing products; the external walls, roofs, window awnings and bathrooms; fire protection panels; furnace insulating pads; sheet vinyl or floor tiles and underlay for sheet flooring and fire blankets.

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Why is asbestos a problem?

Damage to material containing asbestos can result in the release of small asbestos fibres that become airborne and are readily inhaled. Although not acutely toxic, asbestos fibres can remain in the lungs for long periods. All forms of asbestos are carcinogenic to humans. Exposure to asbestos causes cancer of the lung, larynx, and ovaries, and also mesothelioma (a cancer of the pleural and peritoneal linings). Asbestos exposure is also responsible for other diseases such as asbestosis (fibrosis of the lungs), and plaques, thickening and effusion in the pleura.

Currently, about 125 million people in the world are exposed to asbestos at the workplace. Approximately half of the deaths from occupational cancer are estimated to be caused by asbestos. In addition, it is estimated that several thousand deaths annually can be attributed to exposure to asbestos in the home.

It has also been shown that co-exposure to tobacco smoke and asbestos fibres substantially increases the risk for lung cancer and the heavier the smoking, the greater the risk.

Actions for the protection of workers

- As a minimum measure, provide workers and volunteers with gloves, goggles, disposable clothing or replacement clothing (so that workers do not take contaminated clothing home) and disposable dust masks. Contaminated clothing and protective equipment should be disposed of in the same way as other asbestos-containing materials.
- Provide simple and easy-to-understand information for people involved in clean up work that describes what asbestos is, where it might be found, what the hazards are, and how to handle and dispose of it safely.
- Trained personnel should inspect sites where there may be asbestos-containing materials to identify the type of materials, the hazard that they present and the safest course of action (e.g. to seal and leave in place, or to remove).
- Provide washing facilities for workers. Ensure that they are aware of the need to wash before eating, drinking or smoking and before returning home to minimise the risk of spreading asbestos fibres outside of the worksite.

Safe handling of asbestos containing material

- Identify the locations of asbestos-containing materials and carry out a risk assessment
- Ensure that people involved in the clean up work are adequately informed of the risks and best practices.
- Minimize the release of respirable asbestos in the atmosphere by wetting;
- Minimize the extent to which people have contact with asbestos;
- Ensure that material containing asbestos is segregated from other waste products, is securely stored and is adequately labelled before disposal;
 - Ensure that waste is disposed of in an approved manner.



Disposal of asbestos-containing materials

DO NOT dispose of asbestos waste by burning.

- Asbestos containing material should be disposed of by properly trained personnel.
- Transport asbestos waste in bulk. During transportation, ensure that containers remain covered or sealed so that dust and fibres do not escape.
- Do not mix asbestos waste with other waste prior to disposal.
- Disposed of this material in landfill sites provided these sites are appropriately engineered to prevent the release of asbestos fibre. Such a site would have a liner and a system for leachate collection, and a system for newly deposited waste to be covered immediately with a layer of suitable inert material.
- Do not dispose the asbestos waste within the engineered landfill site in a location where there may be future construction such as leachate headwells and gas extraction wells.
- In the event that engineered landfills do not exist, or were damaged, sites for the temporary storage of asbestos waste must be identified and prepared.
- Ensure that a record is kept of the locations for the disposal of asbestos waste, including exact geographical coordinates.

General protection measures

- Restrict access to sites where there are piles of building debris, and to demolition sites and waste sites. In particular, keep children away.
- Try to keep any manipulation of asbestos-containing materials to a minimum. If it is necessary to move, saw or break up such materials, do it as gently as possible and keep them thoroughly wet to reduce the amount of airborne fibres and dust.
- Clean surfaces contaminated with asbestos-containing materials using wet methods. Do not dust or sweep or use a domestic vacuum cleaner because this will propel fibres and dust into the air.
- Keep piles of asbestos-containing materials covered until they can be safely stored or disposed of. Wet thoroughly before moving the materials.
- Store asbestos-containing waste material in sealable containers until it can be disposed of safely. Containers can be drums of metal, plastic or fibre, or strong polyethylene bags. If using bags, put one bag inside another, sealing each with tape. Label the containers and include a hazard warning, for example:

“DANGER! CONTAINS ASBESTOS FIBRES. HARMFUL IF INHALED. MAY CAUSE CANCER. KEEP SEALED. AVOID CREATING DUST”.

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