

ASBESTOS SAFETY

CIRSA SAFETY QUIZ RESOURCE



The word “asbestos” is derived from a Greek adjective meaning “inextinguishable.” The “miracle mineral”, as it was referred to by the Greeks, was admired for its soft pliant properties as well as its ability to withstand heat¹. From the time of the Greeks and Romans in the first century until its re-emergence in the nineteenth century, asbestos received little attention or use. It was not available in large amounts until extensive deposits were discovered in Canada in the late 1800s. Following this discovery, asbestos emerged as a component in thermal insulation for boilers, pipes, and other high temperature applications, and as a reinforcement material for a variety of building materials.

The EPA banned the use of asbestos in spray-applied products in 1978. Asbestos, however, is still being used in products imported into the United States. The primary sites of commercial production are Canada, Russia, and South Africa and include felt products (pipe wrap, roofing felt, and flooring felt), asbestos cement products, friction products (drum brake linings, disc brake pads, clutch facings, and automatic transmission components), industrial and commercial friction products, coatings, and paper products. Asbestos was also previously mined commercially in the United States and still exists in buildings that were constructed prior to the EPA ban.

Asbestos is a naturally occurring mineral. It is distinguished from other minerals by the fact that its crystals form long, thin fibers. Asbestos has been used in hundreds of products because it is plentiful, readily available, cost effective, strong, does not burn, effectively insulates, and is impervious to chemical degradation. Asbestos was formerly utilized in many types of construction and was added to a variety of building materials to enhance durability.

Modern knowledge linking asbestos and a lung disease called Asbestosis dates to the 1920s. In the 1960s the link between asbestos and a rare form of cancer called Mesothelioma was established². Autopsy reports from 1935 - 1952 indicated that many people who died from asbestosis also had lung cancer³. The following adverse health effects have been noted among the population exposed to asbestos fibers.

- Lung cancer
- Mesothelioma
- Asbestosis

There is also a correlation between exposure to asbestos and Chronic Obstructive Pulmonary Disease (COPD)⁴. Asbestos causes Mesothelioma and cancer of the lung, larynx, and ovary. Positive associations have also been observed between exposure to all forms of asbestos and cancer of the pharynx, stomach, and colorectum⁵.

In most situations, building materials containing asbestos pose little threat to employees if the material is intact. However, disturbing asbestos and inhaling fibers can pose a serious health risk. Asbestos can only be positively identified by laboratory analysis.

Asbestos can still be found in products manufactured today. Common building materials that may historically have contained asbestos include:

- Floor tile
- Ceiling tile
- Linoleum sheeting
- Pipe wrap
- Vermiculite insulation
- Acoustic sink undercoating
- Mastics and adhesives
- Dry wall joint compound
- Troweled Plaster
- Gaskets and shims
- Boiler insulation
- Vapor seal
- Window glaze

If material is suspected to contain asbestos, it is very important not to disturb it and to contact a certified asbestos professional to collect a sample for laboratory analysis.

If suspect material is identified as containing asbestos, a supervisor must be notified. If the material appears damaged, the area should be isolated and secured. If possible, the ventilation system should also be modified so as not to spread asbestos fibers to other areas.

Asbestos exposure can be a serious health hazard, but it does not have to be. Having an asbestos management plan which includes building surveys and materials inventory is the safest way to manage asbestos exposure in the workplace. Awareness training should be conducted for employees that have the potential to be exposed to building materials containing asbestos.

Sources:

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3. Doll, R. (1955). [Mortality from Lung Cancer in Asbestos Workers. British Journal of Industrial Medicine](#), 12(2), 81-86. Retrieved April 7, 2021
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5. [IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Arsenic, Metals, Fibres and Dusts](#). Lyon (FR): International Agency for Research on Cancer; 2012. (IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, No. 100C.) ASBESTOS (CHRYSTOLE, AMOSITE, CROCIDOLITE, TREMOLITE, ACTINOLITE AND ANTHOPHYLLITE)



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