Asbestos Safety Talk

Safety Talk

WHAT'S AT STAKE?

What is asbestos?

Asbestos is the name given to a group of naturally occurring minerals that are resistant to heat and corrosion. Asbestos has been used in products, such as insulation for pipes (steam lines for example), floor tiles, building materials, and in vehicle brakes and clutches. Asbestos includes the mineral fibers chrysotile, amosite, crocidolite, tremolite, anthophyllite, actinolite and any of these materials that have been chemically treated or altered. Heavy exposures tend to occur in the construction industry and in ship repair, particularly during the removal of asbestos materials due to renovation, repairs, or demolition. Workers are also likely to be exposed during the manufacture of asbestos products (such as textiles, friction products, insulation, and other building materials) and during automotive brake and clutch repair work.

What are the hazards of asbestos?

Asbestos is well recognized as a health hazard and its use is now highly regulated by both OSHA and EPA. Asbestos fibers associated with these health risks are too small to be seen with the naked eye. Breathing asbestos fibers can cause a buildup of scar-like tissue in the lungs called asbestosis and result in loss of lung function that often progresses to disability and death. Asbestos also causes cancer of the lung and other diseases such as mesothelioma of the pleura which is a fatal malignant tumor of the membrane lining the cavity of the lung or stomach. Epidemiologic evidence has increasingly shown that all asbestos fiber types, including the most commonly used form of asbestos, chrysotile, causes mesothelioma in humans.[1],[2],[3]

What can be done to reduce the hazards of asbestos?

Worker exposure to asbestos hazards are addressed in specific OSHA standards for the construction industry, general industry and shipyard employment sectors. These standards reduce the risk to workers by requiring that employers provide personal exposure monitoring to assess the risk and hazard awareness training for operations where there is any potential exposure to asbestos. Airborne levels of asbestos are never to exceed legal worker exposure limits. There is no “safe” level of asbestos exposure for any type of asbestos fiber. Asbestos exposures as short in duration as a few days have caused mesothelioma in humans. Every occupational exposure to asbestos can cause injury of disease; every occupational exposure to asbestos contributes to the risk of getting an asbestos related disease.8 Where there is exposure, employers are required to further protect workers by establishing regulated areas, controlling certain work practices and instituting engineering controls to reduce the airborne levels. The employer is required to ensure exposure is reduced by using administrative controls and provide for the wearing of personal protective equipment. Medical monitoring of workers is also required when legal limits and exposure times are exceeded.

You work with chemicals that are hazardous and harmful to your overall – health. But you must be protected from injury or illness along with your co-workers.

The chemical manufacturer or importer prepares Material Safety Data Sheets (MSDS) to enable you to know how to handle chemicals, what protective equipment you need to use and, finally, what to do if something goes wrong.

WHAT’S THE DANGER?

Working with asbestos products causes the release of tiny fibers of the mineral into the air. Once inhaled, these fibers get stuck in the lining of the lungs, causing scarring and inflammation. Eventually, the lungs cells may become so damaged that cancer develops.

One rare type of cancer nearly always linked to asbestos exposure is pleural mesothelioma. Although there is currently no cure, there are several options for treating mesothelioma. Other deadly cancers are linked to asbestos, as well as chronic respiratory illnesses such as asbestosis.

A single massive exposure to asbestos can affect a person quickly, but when a worker is regularly exposed to moderate amounts at contaminated jobsites, noticeable symptoms may not appear until decades later. However, the length of time it takes for disease to manifest has no relation to the severity of the symptoms.

Types of Asbestos

The term asbestos refers to six fibrous minerals that occur naturally throughout the world.

- Chrysotile
- Tremolite
- Crocidolite
- Amosite
- Anthophyllite

Chrysotile is by far the most widely used type of asbestos. It accounts for approximately 95 percent of asbestos used around the world.

Asbestos fibers are naturally resistant to heat, fire, electricity and chemicals. These properties made it an ideal additive in products to prevent fire and chemical corrosion.

HOW TO PROTECT YOURSELF

OSHA has 3 different sets of standards to protect workers from asbestos depending on the type of workplace. These standards include the general workplace as well as workers in shipyards and construction sites.

These standards protect private workers as well as state and local government workers in the 23 states with federally-approved state OSHA laws. The Environmental Protection Agency (EPA) is responsible for protecting state and local employees who are in

states without OSHA-approved occupational safety plan, which may be exposed to asbestos. There are a few states that have OSHA programs for public employees that are not federally-approved but do enforce OSHA standards.

OSHA's standards have established the permissible exposure limit (PEL) of asbestos in the workplace as 0.1 fiber per cubic centimeter of air as an 8-hour time-weighted average (TWA).

Keep in mind, though, that legal does not necessarily equate to safe. There is no known safe level of exposure to asbestos.

The standards also include these protections:

- Assessment of workplaces to determine how much asbestos workers might be exposed to before work begins.
- Periodic monitoring of workplaces to determine if asbestos exposure is above the PEL.
- Signage communicating areas where asbestos work is being performed to prevent contamination.
- Separate lunch and decontamination areas for workers exposed to the PEL with proper hygiene practices to avoid contamination.
- Training for workers who may be exposed at or above the PEL before work begins and yearly after that.
- Medical surveillance, which is industry-dependent. In general, medical examinations must be made available for workers exposed at or above the PEL.
- Records must be kept on asbestos exposure monitoring for at least 30 years. Additionally, medical surveillance records for workers must be saved for the duration of employment and 30 years after.

FINAL WORD

Exposure studies including the anecdotal history reveal volumes about the health effects of asbestos. Keep in mind, there is no known safe level of exposure to asbestos.