

DANGER

ASBESTOS
CANCER AND LUNG
DISEASE HAZARD
AUTHORIZED
PERSONNEL ONLY
RESPIRATORS AND
PROTECTIVE
CLOTHING ARE
REQUIRED IN THIS
AREA

OSHA FACT Sheet

Asbestos

What is asbestos?

Asbestos is the name given to a group of naturally occurring minerals used in certain products, such as building materials and vehicle brakes, to resist heat and corrosion. Asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, actinolite asbestos, and any of these materials that have been chemically treated and/or altered.

What are the dangers of asbestos exposure to workers?

The inhalation of asbestos fibers by workers can cause serious diseases of the lungs and other organs that may not appear until years after the exposure has occurred. For instance, asbestosis can cause a buildup of scar-like tissue in the lungs and result in loss of lung function that often progresses to disability and death. Asbestos fibers associated with these health risks are too small to be seen with the naked eye, and smokers are at higher risk of developing some asbestos-related diseases.

Are you being exposed to asbestos?

General industry employees may be exposed to asbestos during the manufacture of asbestos-containing products or when performing brake and clutch repairs. In the construction industry, exposure occurs when workers disturb asbestos-containing materials during the renovation or demolition of buildings. Employees in the maritime environment also may be exposed when renovating or demolishing ships constructed with asbestos-containing materials. In addition, custodial workers may be exposed through contact with deteriorating asbestos-containing materials in buildings.

Are there any OSHA standards that cover workers exposed to asbestos?

Yes. The Occupational Safety and Health Administration (OSHA) has the following three standards to protect workers from exposure to asbestos in the workplace:

- 29 *CFR* 1926.1101 covers construction work, including alteration, repair, renovation, and demolition of structures containing asbestos.
- 29 *CFR* 1915.1001 covers asbestos exposure during work in shipyards.
- 29 *CFR* 1910.1001 applies to asbestos exposure in general industry, such as exposure during brake and clutch repair, custodial work, and manufacture of asbestos-containing products.

The standards for the construction and shipyard industries classify the hazards of asbestos work activities and prescribe particular requirements for each classification:

- **Class I** is the most potentially hazardous class of asbestos jobs and involves the removal of thermal system insulation and sprayed-on or troweled-on surfacing asbestos-containing materials or presumed asbestos-containing materials.
- **Class II** includes the removal of other types of asbestos-containing materials that are not thermal system insulation, such as resilient flooring and roofing materials containing asbestos.
- **Class III** focuses on repair and maintenance operations where asbestos-containing or presumed asbestos-containing materials are disturbed.
- **Class IV** pertains to custodial activities where employees clean up asbestos-containing waste and debris.

There are equivalent regulations in states with OSHA-approved state plans.

What are the permissible exposure limits for asbestos?

Employee exposure to asbestos must not exceed 0.1 fiber per cubic centimeter (f/cc) of air, averaged over an 8-hour work shift. Short-term exposure must also be limited to not more than 1 f/cc, averaged over 30 minutes. Rotation of employees to achieve compliance with either permissible exposure limit (PEL) is prohibited.

Are employers required to conduct exposure monitoring?

In construction and shipyard work, unless you are able to demonstrate that employee exposures will be below the PELs (a “negative exposure assessment”), you are generally required to conduct daily monitoring for workers in Class I and II regulated areas. For workers in other operations where exposures are expected to exceed one of the PELs, you must conduct periodic monitoring. In general industry, you must perform initial monitoring for workers who may be exposed above a PEL or above the excursion limit. You must conduct subsequent monitoring at reasonable intervals, and in no case at intervals greater than 6 months for employees exposed above a PEL.

Must employers create regulated areas?

You must create controlled zones known as regulated areas that are designed to protect employees where certain work with asbestos is performed. You must limit access to regulated areas to authorized persons who are wearing appropriate respiratory protection. You must also prohibit eating, smoking, drinking, chewing tobacco or gum, and applying cosmetics in these areas. You must display warning signs at each regulated area. In construction and shipyards, workers must perform Class I, II, and III asbestos work (and all other

operations where asbestos concentrations may exceed a PEL) within regulated areas. In general industry, you must establish regulated areas wherever asbestos concentrations may exceed a PEL.

What compliance methods must employers use to control exposures?

You must control exposures to or below the PELs using engineering controls and work practices to the extent feasible. Where feasible engineering controls and work practices do not ensure worker protection at the exposure limits, you must reduce employee exposures to the lowest levels achievable and then supplement them with respiratory protection to meet the PELs. In construction and shipyards, each work classification has specific control method requirements. In general industry, specific controls are prescribed for brake and clutch repair work. For example, you must prohibit certain practices, such as the use of compressed air, to remove asbestos.

When are employers required to provide respiratory protection for workers?

You must provide and ensure the use of respirators when a PEL is exceeded. In construction and shipyards, you must require workers to use respirators when performing certain work. Generally, the level of exposure determines the type of respirator needed. In addition, the standards specify the type of respirator to be used for certain asbestos work. (See *CFR* 1910.134.) Employees must get respirator training and medical clearance to use respirators.

Are employers required to provide protective clothing for workers?

Yes. For any employee exposed to airborne concentrations of asbestos that exceed a PEL, you must provide and require the use of protective clothing such as coveralls or similar full-body clothing, head coverings, gloves, and foot coverings. You must provide face shields, vented goggles, or other appropriate protective equipment wherever the possibility of eye irritation exists and require workers to wear them.

Must employers provide hygiene facilities?

Yes. You must establish decontamination areas and hygiene practices for employees exposed above a PEL. In addition, employees may not smoke in work areas that might expose them to asbestos.

Do OSHA standards require employers to provide training?

Yes. In construction and shipyards, you must provide training for employees exposed above a PEL and for employees involved in each identified work classification. The specific training requirements depend upon the particular class of work being performed. In general

industry, you must provide training to all employees exposed above a PEL. You must also provide asbestos awareness training to employees who perform housekeeping operations covered by the standard. You must place warning labels on all asbestos products, containers, and installed construction materials when feasible.

What are employers required to provide concerning medical examinations?

In construction and shipyards, you must provide medical examinations for workers who, for 30 or more days per year, engage in Class I, II, or III work or experience exposure above a PEL. In general industry, you must provide medical examinations for workers who are exposed above a PEL.

What are the recordkeeping requirements for asbestos exposures?

You must keep accurate records of the following:

- All measurements taken to monitor employee exposure to asbestos—30 years;
- Medical records, including physician's written opinions—duration of the employee's employment plus 30 years; and
- Training records—1 year beyond the last date of employment.

How can you get more information on safety and health?

OSHA has various publications, standards, technical assistance, and compliance tools to help you, and offers extensive assistance through workplace consultation, voluntary protection programs, grants, strategic partnerships, state plans, training, and education. OSHA's *Safety and Health Program Management Guidelines* (*Federal Register* 54:3904-3916, January 26, 1989) detail elements critical to the development of a successful safety and health management system. This and other information are available on OSHA's website.

- For one free copy of OSHA publications, send a self-addressed mailing label to OSHA Publications Office, P.O. Box 37535, Washington, DC 20013-7535; or send a request to our fax at (202) 693-2498, or call us at (202) 693-1888.
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- To file a complaint online or obtain more information on OSHA federal and state programs, visit OSHA's website.

This is one in a series of informational fact sheets highlighting OSHA programs and standards. It does not impose any new compliance requirements or carry the force of legal opinion. For compliance requirements of OSHA standards or regulations, refer to *Title 29 of the Code of Federal Regulations*. This information will be made available to sensory impaired individuals upon request. Voice phone is (202) 693-1999. See also OSHA's website at www.osha.gov.

