

## NYCOSH Asbestos Fact Sheet #2

## OSHA Asbestos Standards

Most buildings constructed through 1980 contain asbestos. Asbestos was used as insulation on pipes and in boiler rooms, as well as fireproofing on beams. It was also used in building materials, including acoustical plaster and ceiling and floor tiles.

Despite common belief, asbestos is not completely banned in the U.S. It continues to be used in many building products and in other types of products, such as vehicle brakes.

*Asbestos is deadly.* When it's inhaled, asbestos fibers can cause cancer or other lung diseases. Construction and renovation work often release large amounts of asbestos fibers.

The **OSHA Construction Industry Asbestos Standard** (29 CFR 1926.1101) regulates occupational asbestos exposure during:

- demolition or salvage activities where asbestos is present
- removal or encapsulation of materials that contain asbestos
- construction, alteration, repair, maintenance, or renovation work that involves asbestos-containing materials
- installation of products that contain asbestos, and
- transportation, disposal, storage, containment, or housekeeping activities that involve asbestos-containing materials, at construction sites.

(The construction asbestos standard does *not* apply to asbestos-containing asphalt roof coatings, cements or adhesives.)

The **OSHA General Industry Asbestos Standard** (29 CFR 1910.1001) applies to all other occupational exposures to asbestos. (Construction and maritime work have their own OSHA asbestos standards.)

### How do I know if I am working with asbestos?

"Asbestos-containing material" (ACM) is defined by law as any material that consists of greater than 1% asbestos by weight. This is determined by laboratory analysis of a sample of the material.

"Presumed asbestos-containing material" (PACM) is defined as insulation or sprayed-on or troweled-on material found in buildings constructed no later than 1980.

Whether or not a material is ACM cannot be determined by visual inspection. Only laboratory analysis can determine whether asbestos is present. This means that neither you nor your employer can determine whether or not a material contains asbestos simply by looking at it.

If in doubt, assume a suspect material contains asbestos until proven otherwise. PACM must by law be considered to be asbestos unless tested and proved not to be.

### What are OSHA's legal limits for asbestos exposure?

The OSHA construction and general industry asbestos standards establish two Permissible Exposure Limits (PELs) for asbestos in air. Employers cannot legally expose workers to greater than 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc), averaged over 8-hours. This is called the *time-weighted average limit* (TWA).

Also, employers cannot expose workers to greater than 1.0 f/cc averaged over a 30-minute sampling period. This is called the *excursion limit*.

### How can I find out how much asbestos is in the air I'm breathing?

The only way to determine the amount of asbestos in the air is to measure it with special equipment. A pump draws air through a filter and collects asbestos fibers from the air, just as your lungs do. This is called *personal monitoring*. The filter is sent to a laboratory, where a qualified technician uses a microscope to count the asbestos fibers on the filter.

### EMPLOYER REQUIREMENTS

**Exposure Monitoring:** The employer must assess employee exposure when employees may "reasonably be expected" to be exposed to airborne concentrations of asbestos at or above the PELs. Initial assessment must include representative sampling for both the 8-hour time weighted average PEL and the 30-minute excursion PEL.

Follow-up sampling for *general industry* jobs must occur at "reasonable" periods. These reasonable periods may not exceed six months.

Follow-up sampling for *construction* work depends on the type of work:

- **Class 1 asbestos work** (removal of insulation ACM and sprayed-on or troweled-on ACM) requires daily representative personal monitoring.
- **Class 2 asbestos work** (removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, construction mastics [adhesives] and other non-thermal insulation or surfacing material) also requires daily representative personal monitoring.

- **Class 3 asbestos work** (repair and maintenance operations, where ACM is likely to be disturbed requires "periodic" monitoring.
- **Class 4 asbestos work** (maintenance and custodial work where employees come into contact with but do not disturb ACM, and/or work involving the clean up of dust, waste and debris from Class 1, 2, and 3 activities) requires "periodic" monitoring.

If employer data demonstrate that exposures will be below the PELs, additional monitoring is not required. This is called a *negative exposure assessment*. If conditions change, additional monitoring may be required.

**Respiratory Protection:** See NYCOSH Fact Sheet #6.

**Protective Clothing:** The employer must provide whole-body protective clothing, including head coverings, gloves, and foot coverings, for workers exposed above the PELs.

**Regulated Areas:** Where Class 1, 2, or 3 asbestos work will be conducted, *or if there is a "reasonable possibility" that the PELs may be exceeded*, the employer must establish a "regulated area." In a regulated area:

- Access must be limited to trained and authorized personnel.
- Entry and exit must be through a decontamination unit consisting of a connected equipment room, shower room, and clean room.
- Asbestos must be prevented from escaping through measures such as physical barriers, negative air pressure, and HEPA (high efficiency particulate air) filters.

- Signs warning of asbestos dangers must be posted.
- A “competent person” (a person who has been trained at a government approved center) must supervise the work.
- Respiratory protection must be required. *(Not all respirators protect you equally. The type of respirator your employer must provide depends on the amount of asbestos in the air. To find out which respirator you will need for your job, see NYCOSH Fact Sheet #6.)*

**Control Methods:** Your employer cannot rely only on respirators and protective clothing when you are doing asbestos work. Methods of controlling asbestos also include:

- enclosure or isolation of the work area with plastic barriers to prevent asbestos fibers from escaping
- negative pressure ventilation with a system using HEPA filters, which remove almost 100% of the asbestos fibers in the air
- use of HEPA vacuum cleaners and wet methods during asbestos handling and clean-up to prevent asbestos fibers from becoming airborne
- prompt disposal of asbestos waste in leak-proof containers.

**Training:** Your employer must train you when you begin your job and then once a year after that. The training must cover:

- how asbestos can harm you
- how to recognize asbestos
- safe work practices when working with asbestos, including wet removal, use of a HEPA vacuum for cleanup, no dry sweeping, and proper waste disposal

- proper use of respirators and disposable protective clothing
- what laws apply, including the OSHA asbestos standards and the OSHA Respiratory Protection Standard (29 CFR 1910.134).

In addition, workers who perform most Class 1 and 2 construction work must receive training equivalent to that required by EPA for asbestos abatement workers (usually three days or longer).

Other Class 2 work requires “hands-on” training specific to the materials you are working with, such as roofing materials, flooring materials, ceiling tiles or transite panels.

Workers doing Class 3 work must receive the training required by EPA’s AHERA standard. This training must include a “hands-on” component and is at least 16-hours long (see NYCOSH Fact Sheet #5).

Workers doing Class 3 work must also receive an annual “refresher” training that is at least two-hours long and include a hands-on component.

Workers doing Class 4 work must be trained for at least two-hours.

**Asbestos Inventory:** “Building and facility owners” must determine the presence, location, and quantity of asbestos-containing materials at the work site. They must maintain records of this information. Employers must “exercise due diligence” and must inform employees who are likely to be exposed of the locations of ACM.

**Medical Surveillance:** Your employer must provide medical surveillance if you do Class 1, 2, or 3 asbestos work for more than 30 days per year or if you are exposed above a Permissible Exposure Limit. Your union may also arrange for medical surveillance from an independent (not

employer-based) occupational physician or clinic. Your employer's medical surveillance program must include:

- an annual physical examination
- pulmonary (lung) function tests
- a medical and work history
- a respiratory disease questionnaire.

Remember, the signs of asbestos disease usually do not appear for 15 to 40 years after exposure first occurs. However, if you do get sick years later and want to seek compensation, a "baseline" examination now will document your health status and help doctors relate future changes in your health to your asbestos exposure.

Once you are exposed, you should see the physician regularly. While the scarring of lung tissue that leads to asbestosis is not curable, lung cancer and mesothelioma may be curable if detected early.

**Records:** Your employer must keep accurate and complete records on medical surveillance, training, and workplace asbestos monitoring for 30 years.

**Do the OSHA asbestos standards provide enough protection?**

The OSHA PELs have been strengthened over the years and provide substantial protection. However, EPA and OSHA both agree that there is no safe level of exposure to asbestos.

In other words, any exposure to asbestos *may* eventually produce an asbestos-related disease. (Of course, greater exposure means greater risk.) OSHA acknowledges that exposures at or even below the PELs can still result in "excess cancers" in workers.

Lack of enforcement by OSHA is also a major concern. OSHA does not have adequate funding or staffing and sometimes does not have adequate political will to provide the level of enforcement that is needed.

While all workers who work with or around asbestos-containing materials may be at risk, non-English speaking immigrant workers have been particularly vulnerable to asbestos exposure at the hands of unscrupulous employers.

*NYCOSH Asbestos Fact Sheets:*

*Fact Sheet #1 - Asbestos*

*Fact Sheet #2 - OSHA Asbestos Standards*

*Fact Sheet #3 - New York State Asbestos Law*

*Fact Sheet #4 - New York City Asbestos Law*

*Fact Sheet #5 - Asbestos Hazard Emergency Response Act (AHERA)*

*Fact Sheet #6 - Respirators: Information for Asbestos Workers*