

SYNOPSIS
ASBESTOS STANDARD - CONSTRUCTION
OSHA 1926.58

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SCOPE: This standard applies to all construction work, e.g., work for construction, alteration, and/or repair, including painting and decorating. It includes 1) demolition or salvage; 2) removal or encapsulation of materials containing asbestos; 3) maintenance; 4) installation of products containing asbestos; 5) spill/emergency cleanup; 6) transportation, disposal, storage, or containment of asbestos.

EFFECTIVE DATE: July 21, 1986

COMPLIANCE DATE: January 16, 1987 for all sections.

PERMISSIBLE EXPOSURE
LIMIT (PEL): .2 fibers/cc of air

DEFINITIONS:

ACTION LEVEL - .1 fibers/cc of air

COMPETENT PERSON - One who is capable of identifying asbestos hazards in the workplace and who has the authority to take prompt corrective measures to eliminate them. (See Standard for duties).

FIBER - Means a particulate form of asbestos, tremolite, anthophyllite, or actinolite, 5 micrometers or longer, with length-to-diameter ratio of 3 to 1 or greater.

REQUIREMENTS:

A. Regulated Areas - Must be established when concentrations exceed .2 fibers/cc of air as an 8-hour TWA.

1. Demarcate to minimize number of people exposed.
2. Access limited to authorized persons.
3. Protective clothing and a respirator must be worn.
4. On multi-employer worksite, inform other employers on site.

PROHIBITED ACTIVITIES - Employees shall not eat, drink, smoke, chew tobacco or gum, or apply cosmetics.

B. Asbestos Removal, Demolition, and Renovation Operations - (Not required for small-scale, short duration operations such as valve replacement, pipe repair.)

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B. Asbestos Removal, Demolition, and Renovation Operations (continued)

1. Whenever feasible, establish negative pressure enclosures.
2. Designate a competent person to perform or supervise specific duties; e.g., setting up and maintaining enclosure, employee exposure monitoring, training of employees, ensuring use of proper protective equipment, ensuring that employees use hygiene facilities (clean and dirty changeroom, lunchroom, etc.) and follow decontamination procedures.
3. Assure the competent person is trained in all aspects of asbestos abatement, etc. (EPA Asbestos Training Center course or equivalent.)

C. Exposure Monitoring - Representative monitoring for employees engaged in similar work is allowed.

1. Initial Monitoring - Required at the beginning of each job to accurately determine employee's 8-hour TWA exposure.
Exceptions, monitoring not required when
 - a. Objective data shows that the product or material cannot release airborne fibers which would exceed the action level,
 - b. Previous monitoring of each job which is similar has been done using validated methods.
2. Periodic Monitoring - Daily when exposures are greater than .2 fibers/cc air. If exposures are less than .1 fibers/cc air as 8-hour TWA or if personnel are wearing supplied air, no monitoring is required.
3. Method of Monitoring - See Appendix A
 - a. Personal samples (See Appendix A for collection procedures)
 - b. Analytical (OSHA Reference Method, ORM, or equivalent)
4. Employee Notification - As soon as possible, either in writing or by posting.

D. Methods of Compliance

1. The employer shall use one or any combination of the following control methods to achieve compliance with the PEL:
 - a. Local exhaust ventilation.
 - b. General ventilation.
 - c. Vacuum cleaners with high efficiency particulate air (HEPA) filters.
 - d. Enclosure of processes, use of glove bags.
 - e. Use of wet methods, wetting agents, or removal encapsulants.
 - f. Prompt disposal of wastes.

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D. Methods of Compliance (continued)

2. Whenever the feasible engineering and work practice controls are not sufficient to reduce employee exposures to .2 fibers/cc of air or less, the controls shall be supplemented with respiratory protection.
3. Prohibited Activities:
 - a. High speed abrasive disc saws without appropriate engineering controls.
 - b. Compressed air for cleaning unless in conjunction with ventilation system.
 - c. Spray application of asbestos containing materials.
 - d. Employee rotation to achieve compliance with the PEL.

E. Respiratory Protection - Dust masks (3M 8710 and others) are not allowed.

1. Must be selected as specified in Table D4 and provided at no cost to the employee and used whenever exposures exceed the PEL,
 - a. Until feasible engineering controls are installed or work practice controls are implemented.
 - b. In maintenance and repair activities where engineering and work practice controls are not feasible.
 - c. Emergencies.
2. Respirator Program (See Standard)
 - a. Written program in accordance with 29CFR 1910.134 (b), (d), (e), and (f).
 - b. Initial fit testing and retesting every 6 months for negative pressure respirator users.

F. Protective Clothing

1. Whole body clothing; hooded coveralls, gloves, foot coverings, and eye protection.
2. Laundering - must inform of hazard.
3. Contaminated clothing - placed in sealed, impermeable containers.

G. Hygiene Facilities and Practices - Where exposures exceed PEL,

General

1. Provide clean change areas. (EXCEPTION - For small scale, short duration operations, protective clothing may be cleaned with a portable HEPA filter equipped vacuum.)
2. Provide separate storage for protective clothing and street clothing [per OSHA 1910.141(e)].
3. Clean lunch areas.

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G. Hygiene Facilities and Practices (continued)

4. Employees must wash their hands and face prior to eating, drinking, or smoking.

Removal, Demolition, and Renovation Operations

1. Decontamination area - Must be adjacent and connected to the regulated area including equipment room, shower area, and clean room, in series. (See Standard for entry and exit procedures.)

H. Communication of Hazard to Employees

1. Warning Signs - Used to demarcate regulated area (See Standard for sign specifications).
2. Labels - Affixed to all items except,
 - a. When fibers are modified (bonded, coated, etc.)
 - b. Where concentration is less than .1% in product.
3. Employee Information and Training
 - a. Provide to all employees exposed to 0.1 fibers/cc of air and ensure participation in program.
 - b. Give at initial assignment and annually thereafter.
 - c. Provide so that employee understands (See Standard for required content).

I. Medical Surveillance

1. a. Required whenever employees are exposed at or above the action level for 30 or more days per year or for those who are required by this section to wear negative pressure respirators.
b. Performed under supervision of licensed physician.
2. Frequency
 - a. Prior to assignment where negative pressure respirators are required.
 - b. Within 10 days of the thirtieth day of exposure at or above the action level.
 - c. Annually thereafter.
3. Content
 - a. Medical and work history with emphasis on pulmonary, cardiovascular, and gastrointestinal systems.
 - b. Standardized questionnaire (Appendix D).
 - c. Physical exam including chest x-ray (at discretion of physician) and pulmonary function tests.
 - d. Other exams as required by physician.

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I. Medical Surveillance (continued)

4. Information Provided to the Physician

- a. Copy of 1926.58 and Appendices D, E, and I.
- b. Employee's job duties as they relate to exposure.
- c. Results of monitoring.
- d. Description of personal protective equipment and respiratory equipment.
- e. Information from previous medical exams.

5. Physician's Written Opinion - Content

- a. Results of exam.
- b. Medical conditions causing increased risk of health impairment.
- c. Limitations for use of respirators.
- d. Statement that employee has been informed.
- e. Shall not contain written opinion about other non-related findings.
- f. Copy of written opinion to employee within 30 days.

J. Recordkeeping - (See Standard for content requirements for each section.)

1. Objective data for exempted operations (until superseded).
2. Exposure measurements (30 years).
3. Medical Surveillance (duration of employment plus thirty years).
4. Training (duration of employment plus 1 year).
5. Availability of records (upon request).
6. Transfer of records [per 29 CFR 1910.20(h)].

APPENDICES A (OSHA Reference Method), C (Qualitative and Quantitative Fit Testing Procedures), D (Medical Questionnaires), and E (Interpretation and Classification of Chest Roentgenograms) ARE MANDATORY.

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TABLE D-4

RESPIRATORY PROTECTION FOR ASBESTOS,
TREMOLITE, ANTHOPHYLLITE, AND ACTINOLITE FIBERS

Airborne Concentration of Asbestos, Tremolite, Anthophyllite, Actinolite, or a Combination of These Minerals	Required Respirator
Not in excess of 2 f/cc (10 X PEL)	1. Half-mask air-purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc (50 X PEL)	1. Full facepiece air-purifying respirator equipped with high-efficiency filters.
Not in excess of 20 f/cc (100 X PEL)	**1. Any powered air-purifying respirator equipped with high-efficiency filters. 2. Any supplied-air respirator operated in continuous flow mode.
Not in excess of 200 f/cc (1000 X PEL)	1. Full facepiece supplied-air respirator operated in pressure demand mode.
Greater than 200 f/cc (> 1,000 X PEL) or unknown concentration	1. Full facepiece supplied air respirator operated in pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus.

Note: a. Respirators assigned for higher environmental concentrations may be used at lower concentrations.

b. A high-efficiency filter means a filter that is at least 99.97 percent efficient against mono-dispersed particles of 0.3 micrometers in diameter or larger.

**The employer shall provide a powered, air-purifying respirator in lieu of any negative pressure respirator whenever 1) the employee chooses to use this type of respirator; and 2) this respirator will provide adequate protection to the employee. (Approximate cost, \$400.)

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APPENDIX
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TRAINING PROGRAM REQUIREMENTS

1. Methods of recognizing asbestos,
2. The health effects associated with asbestos exposure,
3. The relationship between smoking and asbestos in producing lung cancer,
4. The nature of operations that could result in exposure to asbestos, the importance of necessary protective controls to minimize exposure including, as applicable, engineering controls, work practices, respirators, housekeeping procedures, hygiene facilities, protective clothing, decontamination procedures, emergency procedures, and waste disposal procedures, and any necessary instruction in the use of these controls and procedures,
5. The purpose, proper use, fitting instructions, and limitations of respirators as required by 29 CFR 1910.134,
6. The appropriate work practices for performing the asbestos job,
7. Medical surveillance program requirements,
8. A review of this standard, including appendices.

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