Asbestos Awareness

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PDH: 2

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Introduction

Asbestos is a widely used, mineral-based material that is resistant to heat and corrosive chemicals. Depending on the chemical composition, fibers may range in texture from coarse to silky. The properties that make asbestos fibers so valuable to industry are its high-tensile strength, flexibility, heat and chemical resistance, and good frictional properties.

Asbestos fibers enter the body by inhalation of airborne particles or by ingestion and can become embedded in the tissues of the respiratory or digestive systems. Years of exposure to asbestos can cause numerous disabling or fatal diseases. Among these diseases are asbestosis, an emphysema like condition; lung cancer; mesothelioma, a cancerous tumor that spreads rapidly in the cells of membranes covering the lungs and body organs; and gastrointestinal cancer.

Since 1972, however, OSHA has regulated asbestos exposure in general industry thereby causing a significant decline in the use of asbestos-containing materials. The revised standard continues to protect workers, in general, who are exposed to asbestos-containing materials but now includes provisions that apply to workers performing brake and clutch repair and to those doing housekeeping in buildings and facilities where asbestos-containing materials exist.

This booklet contains ail overview of tile Occupational Safety and Health Administration's (OSHA's) worker protection requirements for exposure to asbestos in general industry and describes the steps an employer must take to reduce the levels of asbestos in the workplace. The revised rule lowers the permissible exposure limit (PEL), contains mandatory methods of control for brake and clutch repairs, and provides training provisions for maintenance and custodial workers. (OSHA has developed a separate standard and a separate pamphlet for asbestos in the construction industry. See **Related Publications** at the end of this publication for details on how to order.)

Scope and Application

OSHA's revised standards for asbestos were developed in recognition of the vastly different conditions prevailing in the workplaces for general industry (*29 Code* of *Federal Regulations (CFR) Part 1910.1001)*, for the shipyard industry (29 *CFR Part* 1915), and for the construction industry (*29 CFR Part 1926-110.1*) The information in this pamphlet applies to all occupational exposure to asbestos in general industry.

More than 685,000 workers in general industry, mostly in auto repair, are affected by the new standard. OSHA estimates, conservatively, that about 42 additional cancer deaths per year will be avoided in all industries, in addition to the lives saved of those peripherally exposed to asbestos and the lives saved by earlier OSHA standards.

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Provisions of the Standard

OSHA sets out several provisions′ employers must follow to comply with the asbestos standard. The agency has established strict exposure limits and guidelines for exposure monitoring, medical surveillance, record keeping, regulated areas, and communication of hazards.

Permissible Exposure Limits (PELs)

Time- Weighted Average (*TWA*) - The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter of (1 f/cc) as averaged over an 8-hour TWA day.

Excursion Limit (*ELT*) - The employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (0.1 f/cc) as averaged over a sampling period of 30 minutes.

OSHA has adopted the term "excursion limit" to refer to the short-term permissible exposure limit to be consistent with the terminology used by the American Conference of Governmental Industrial Hygienists (ACGIH).

Exposure Monitoring

Except for brake and clutch repair where a "preferred" control method is used, each employer who has a workplace or work operation covered by this standard must assess all asbestos operations for their potential to generate airborne fibers. Where exposure may exceed the PEL, employee exposure measurements must be made from breathing zone air samples representing the 8-hour TWA and 30-minute EL for each employee.

Initial monitoring also must be performed for all employees who are, or may reasonably be expected to be, exposed to airborne concentrations of asbestos at or above the PEL and/or EL unless: (1) monitoring results conducted after March 31, 1992, meet all other standard-related requirements; and (2) the collected data demonstrate that asbestos is not capable of being released in airborne concentrations at or above the PEL and/or EL when materials are being processed, used, or handled. If initial monitoring indicates that exposures are above the PEL and/or EL, periodic monitoring must be conducted at intervals no greater than every 6 months. If either initial or periodic monitoring statistically indicates that employee exposures are below the PEL and/or EL, the employer may discontinue monitoring for those employees whose exposures are represented by such monitoring.

The employer must reinitiate monitoring whenever there has been a change in the production, process, control equipment, personnel or work practices that may result in new or additional exposures to asbestos above the PEL and/or EL, or when the employer has reason to suspect that a change may result in new or additional exposures above the PEL and/or EL.

Affected employees and their representatives must be allowed to observe monitoring and must be notified in writing, either individually or by posting results in an accessible location within 15 working days after the receipt of the results of monitoring. This written notification must contain the corrective action being taken by the employer to reduce employee exposure to asbestos on or below the PEL and/or EL wherever monitoring results indicate that the PEL and/or EL has been exceeded. If monitoring is being observed in a regulated area, the observer must be provided proper protective clothing and equipment.

Purchase this course to see the remainder of the technical materials.