



ASBESTOS - RENOVATION AND DEMOLITION

Are you Remodeling, Renovating or Demolishing?

You may be subject to State and Federal Regulations requiring an inspection for asbestos.

Avoid penalties and delays: If you are impacting greater than the trigger levels of suspect asbestos-containing materials ("ACM") – you must have your project inspected for ACM by a Colorado-certified asbestos building inspector before commencing work.

It is Dangerous and Illegal to Improperly Disturb ACM!

Asbestos can be found in these and many other common building materials: Ceiling textures, vinyl floor coverings and mastic, boiler and pipe insulation, heating and cooling duct insulation, ceiling tile, roofing products, clapboard shingles, etc. These materials may be regulated - a certified asbestos building inspector can determine which materials contain asbestos and which are regulated.

For ALL Renovation Projects:

- Buildings of **any** age may contain ACM; even those newly built may have ACM.
- **Inspection:** If the structures/components to be disturbed exceed the trigger levels, they **must be inspected for asbestos** by a Colorado-certified asbestos building inspector, unless the building was built after October 12, 1988, **AND** the architect or engineer who built it signs and submits documentation showing that no ACM was specified or used in the construction of the building – then no inspection is needed. Asbestos Consulting Firms and asbestos building inspectors can be found in the yellow pages of most telephone books under the heading "Asbestos Consulting and Testing" or go to our web site for a current list: www.colorado.gov/cdphe/asbestos.
- If the amount of ACM to be disturbed exceeds the following trigger levels, then an asbestos abatement contractor must remove the material:
 - **Single-Family Residential Dwellings ("SFRD")** - the trigger levels are: 50 linear feet on pipes; 32 square feet on other surfaces; or the volume equivalent of a 55-gallon drum.
 - **Public and Commercial Buildings** (other than SFRDs) - the trigger levels are: 260 linear feet on pipes; 160 square feet on other surfaces; or the volume equivalent of a 55-gallon drum.
- Under many circumstances, a Colorado-certified General Abatement Contractor (GAC) must remove ACM that is regulated or may become regulated before it is disturbed by renovation or demolition activities. GACs can be found in the yellow pages of most telephone books under the heading, "Asbestos Abatement" or go to our web site for a current list.
- **Notification:** A written application to CDPHE for a notice/permit may be required, along with payment of a fee and a **ten (10) working-day notification period (emergencies may be excluded)** before the removal (abatement) of regulated asbestos-containing materials. **ALL** ACM waste must be disposed of at an approved asbestos waste disposal site – regardless of the quantity or the necessity for a notice/permit.

Demolitions, Destructive Salvage, House Moving

If you demolish, perform destructive salvage, perform de-construction, burn, destroy, dismantle, dynamite, implode, knock down, level, pull down, pulverize, raze, tear down, wreck all of a structure or structural components, or you move a house, you may be subject to State and Federal regulations **even when there is NO asbestos in the facility**. **Demolition means:** the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations or the intentional burning of any facility.

For ALL Demolition Projects:

- **Inspection:** the building or area of the building to be demolished ***must be inspected for asbestos*** by a Colorado-certified asbestos inspector. Asbestos Consulting Firms and asbestos building inspectors can be found in the yellow pages of most telephone books under the heading "Asbestos Consulting and Testing" or go to our web site for a current list:
- **Asbestos Removal** (if necessary) may have to be performed by a Colorado-certified GAC. Removal, in accordance with Regulation No. 8, Part B, is required if the amount of asbestos-containing material that is friable or will become friable during demolition exceeds the trigger levels.
- **A Demolition Notification Application Form** must be submitted to the CDPHE, **even if no asbestos was found during the inspection**, along with payment of a notification fee and a **ten (10) working-day notification period** that is required before the demolition can commence.

During Demolition:

- Recycling of materials, such as concrete or wood, that are bonded or contaminated with asbestos-containing material (ACM), such as floor tile or mastic, is NOT permitted.
- Demolition of a building that has non-friable asbestos-containing vinyl asbestos tile (VAT) or tar-impregnated roofing materials remaining must be completed without causing the asbestos-containing materials to become friable. Concrete floors covered with floor tile shall be removed in large sections if possible. Operations such as crushing, pneumatic jacking, etc. of materials containing asbestos are not permitted.
- When imploding or burning a structure, ALL asbestos-containing material, regardless of type or quantity, **MUST** be removed prior to demolition.

For More Information or Forms, please contact:

Asbestos Compliance Assistance Group

Phone: (303) 692-3100

Fax: (303) 782-0278

Toll Free: 1-800-886-7689

Web page: <http://www.colorado.gov/cdphe/asbestos>

Email address: cdphe.asbestos@state.co.us

Have your project inspected by a Colorado-certified asbestos building inspector before you begin renovation or demolition activities

Violation of asbestos regulations can result in monetary penalties and project delays.



ASBESTOS BANS

Since it was first used, asbestos fibers have been put into over 3,000 types of products. Although most people believe that there is a certain year after which the use of asbestos was prohibited, the use of asbestos-containing products has never been completely banned in the United States. Below is a brief listing of what specifically has been banned and what has not.

Bans on the use of certain asbestos-containing materials (ACM)*:

****By the Environmental Protection Agency (EPA)***

- 1973 – Spray-applied surfacing ACM for fireproofing/insulating purposes.
- 1975 – Installation of wet-applied and pre-formed (molded) asbestos pipe insulation, and installation of pre-formed (molded) asbestos block insulation on boilers and hot water tanks (thermal system insulation).
- 1978 – Spray-applied surfacing ACM for "decorative" purposes.
- 1989 (reconfirmed in 1993) Asbestos-containing product use categories:
 - Corrugated paper
 - Rollboard
 - Commercial paper
 - Specialty paper
 - Flooring felt
 - New uses of asbestos
- 1990 – Prohibited the spray-on application of materials containing more than 1% asbestos to buildings, structures, pipes, and conduits unless the material is encapsulated with a bituminous or resinous binder during spraying and the materials are not friable after drying.

Bans on the use of certain asbestos-containing materials (ACM)*:

**** Consumer Product Safety Commission (CPSC)***

- 1977 – Products such as spackling compounds, tape joint compounds, and other mixtures that consumers use to patch or seal cracks, holes, or other imperfections in drywall and other surfaces. These products may be in dry form ready to be mixed with water or may be an already-mixed paste.
- 1977 – Decorative simulated ashes or embers that are placed under artificial logs in gas-burning fireplaces and that, when heated, glow like real burning embers. The ban includes material containing asbestos that is glued to artificial logs either at the factory or by consumers using an "emberizing" kit, and also covers artificial embers and ashes used in artificial fireplaces for decorative purposes.

The following uses of asbestos-containing material have not been banned:

- Troweled-on surfacing asbestos-containing material.
- Asbestos-cement corrugated sheet, asbestos-cement flat sheet, asbestos clothing, pipeline wrap, roofing felt, vinyl-asbestos floor tile, asbestos-cement shingle, millboard, asbestos-cement pipe, automatic transmission components, clutch facings, friction materials, disc brake pads, drum brake linings, brake blocks, gaskets, non-roofing coatings, and roof coatings.
- The EPA still allows, on equipment and machinery, spray-on application of materials that contain more than 1% asbestos where the asbestos fibers in the materials are encapsulated with a bituminous or resinous binder during spraying and the materials are not friable after drying; or for friable materials, where either no visible emissions are discharged to the outside air from spray-on application, or specified methods are used to clean emissions containing particulate asbestos material before they escape to, or are vented to, the outside air.

Products manufactured in other countries that have not banned the use of asbestos are still available for purchase in the United States.

The ONLY way to know with absolute certainty if a material contains asbestos is to have the material tested by an accredited laboratory and the only way to know where asbestos-containing material is located in a home or any other building is to have an inspection by a Colorado certified Asbestos Building Inspector. You can find inspectors in the yellow pages under "Asbestos Consulting & Testing" or visit our web page for a list of registered Asbestos Consulting Firms.

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GENERAL INFORMATION ON ASBESTOS

What is Asbestos?

Asbestos is the name given to a number of naturally occurring minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The types of asbestos that are regulated are: Chrysotile, Amosite, Crocidolite, Anthophyllite, Tremolite, and Actinolite. Asbestos deposits can be found throughout the world and are still mined in South America, Australia, Canada, South Africa, and the former Soviet Union.

Why is Asbestos a hazard?

Asbestos is made up of microscopic bundles of fibers that may become airborne when disturbed. If these fibers get into the air, they can be inhaled into the lungs where they may cause significant health problems. Researchers still have not determined a "safe level" of exposure but we do know that the higher the concentration of fibers and the longer the exposure, the greater the risk of contracting an asbestos-related disease. Some of these health problems include:

- **Asbestosis** - a lung disease that causes scarring of the lungs. Eventually, this scarring may become so severe that the lungs cannot function. The latency period (meaning the time between the exposure and the onset of disease) is often 25-40 years.
- **Mesothelioma** - a cancer of the lining of the lung and chest and/or the lining of the abdominal wall. Asbestos exposure is one of the few causes of this cancer. The latency period for mesothelioma is often 15-50 years.
- **Lung Cancer** – Lung cancer can be caused by exposure to asbestos. A person has a much greater chance (50 to 84 times greater) of developing lung cancer if they are exposed to asbestos and they smoke. Cancer of the gastrointestinal tract can also be caused by asbestos exposure. The latency period for these cancers is often 15-30 years.

Despite the common misconception, exposure to asbestos fibers does not cause headaches, upper respiratory irritation or other immediate symptoms. As mentioned above, the effects often go unnoticed for 15-50 years.

When is Asbestos a hazard?

Asbestos-containing materials (ACM) in good condition should not pose a hazard to building occupants. If these materials can be maintained in good condition, it is recommended that they be left alone and periodic surveillance performed to monitor their condition. It is only when ACM is disturbed or the materials become damaged that it becomes a hazard. When the materials become damaged, the fibers separate and may then become airborne. In the asbestos industry, the term '**friable**' is used to describe an ACM that can be reduced to powder by hand pressure. '**Non-friable**' means an ACM that is too hard to be reduced to powder by hand pressure. Mechanical grinding, sanding and dry-buffing are some ways of causing non-friable materials to become friable.

Where Can Asbestos Be Found?

Asbestos was, and still is, used in building materials for a variety of reasons. Asbestos fibers are incredibly strong and have properties that make them resistant to heat, chemical damage and insulate against electricity as well as adding durability to a product. Asbestos was added to thermal and acoustic insulation, fireproofing, roofing products and flooring. Some of the more common products that may contain asbestos include:

Acoustical Plaster	Decorative Plaster	Joint Compounds
Adhesives and Mastics	Ductwork Flexible Fabric Connections	Laboratory Gloves
Asphalt Floor Tile	Electric Wiring Insulation	Laboratory Hoods/Table Tops
Base Flashing	Electrical Cloth	Packing Materials (for wall/floor penetrations)
Blown-in Insulation	Electrical Panel Partitions	Pipe Insulation (corrugated air-cell, block, etc.)
Boiler Insulation	Elevator Brake Shoes	Roofing Felt
Breaching Insulation	Elevator Equipment Panels	Roofing Shingles
Carpet Backings	Fire Blankets	Spackling Compounds
Caulking/Putties	Fire Curtains	Spray-Applied Insulation
Ceiling Tiles and Lay-in Panels	Fire Doors	Taping Compounds (thermal)
Cement Pipes	Fireproofing Materials	Textured Paints/Coatings
Cement Siding	Flooring Backing	Thermal Paper Products
Cement Wallboard	Heating and Electrical Ducts	Vinyl Floor Tile
Chalkboards	High Temperature Gaskets	Vinyl Sheet Flooring
Construction Mastics (floor tile, carpet, ceiling tile, etc.)	High Temperature Paper Products	Vinyl Wall Coverings
Cooling Towers	HVAC Duct Insulation	Wallboard

Wasn't Asbestos Banned?

There are common misunderstandings about an Environmental Protection Agency (EPA) ban on ACM products or uses from 1989. Many sources incorrectly report that all asbestos-containing products have been banned. In 1991, the U.S. Fifth Circuit Court of Appeals vacated much of the so-called "Asbestos Ban and Phaseout" rule and remanded it to the EPA. Thus, much of the original 1989 EPA ban on the U.S. manufacturing, importation, processing, or distribution in commerce of many asbestos-containing product categories was set aside and did not take effect. Six asbestos-containing product categories are still subject to the 1989 asbestos ban. However, EPA has no existing bans on other asbestos-containing products or uses. Products manufactured in other countries may also contain asbestos and can be imported into the United States.

EPA does NOT track the manufacture, processing, or distribution in commerce of asbestos-containing products. It would be prudent for a consumer or other buyer to inquire as to the presence of asbestos in particular products. Possible sources of that information would include inquiring of the dealer/supplier or manufacturer, refer to the product's "Safety Data Sheet" (SDS), or consider having the material tested by an accredited laboratory before installing it in your building.

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