

ASBESTOS in DEPARTMENT OF ADMINISTRATION FACILITIES – Frequently Asked Questions

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What is Asbestos?

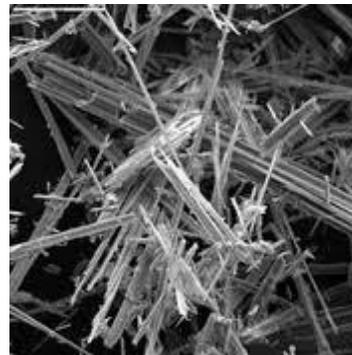
Asbestos is the generic term for a group of naturally occurring, fibrous minerals with a high tensile strength, flexibility, and resistance to heat, chemicals, and electricity.

What does asbestos look like?

Asbestos occurs as long fibrous crystals but by the time it is crushed and incorporated into a product the fibers are so small you would need a microscope to see them!



Asbestos (Raw)



Asbestos as seen under Microscope

Is asbestos dangerous?

Because very few asbestos containing materials (ACM) are being installed today, due to the Environmental Protection Agency (EPA) phase out rule in 1989, most worker exposures occur during the removal of asbestos or during renovation or maintenance in older buildings.

- ACM that is easily crumbled (friable), i.e., by just hand pressure, is dangerous because it can easily release its microscopic asbestos fibers to become airborne. Example: Ceiling tile.
- ACM that is hard to damage (non-friable) can still release asbestos when damaged such as by cutting, sawing and sanding or being scraped. Example: Vinyl floor tile.
- The danger of asbestos is when the microscopic asbestos fibers suspended in the air are inhaled or get in drink or on food and are digested. Unprotected exposure to large amounts of asbestos over a long time can lead to chronic illnesses such as:
 - Asbestosis (reduced lung capacity through accumulated scarring)
 - Mesothelioma (cancer between the inner and outer lining of the lungs)
 - Gastrointestinal (stomach) cancer
 - Lung Cancer (smoking alone causes lung cancer; smokers with chronic asbestos exposure have a 50-100 times increased chance of lung cancer)

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How quickly would I get sick if I worked with asbestos?

Symptoms of asbestos-related diseases may not show for 10 to 40 years. Whether you get sick depends on how often and how much you are exposed to asbestos. A one-time small amount (transient exposure) has little potential for injury. It is very doubtful that one fiber or a few will cause illness or kill. The more medically accepted dose-response theory is the greater the amount and frequency of exposure, the greater the risk. Our goal is incidental to no exposures.

Am I entitled to a medical exam if I am exposed to asbestos?

Since Department of Administration employees are to follow work procedures that prevent chronic exposure to asbestos, employees that experience transient exposures most likely will not contract an asbestos related disease. An X-Ray or other tests will not provide you with any useful asbestos-related illness information, but you may always consult with your doctor if you are still concerned. Workers Compensation probably will not cover such a consult.

What is a “safe” level of asbestos exposure?

The current Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit is 0.1 fibers per cubic centimeter (f/cc) per an average 8-hour workday or 1 f/cc per 30 minutes of exposure. Exposure level is normally determined through air sampling (not required for the Department of Administration due to our not working directly with asbestos).

- Asbestos Containing Material (ACM): any building material that contains more than one percent (1%) asbestos
- Presumed ACM (PACM): Thermal System Insulation, Surfacing Materials and Floor Tile installed prior to 1980 can be presumed to (treat as if it does) contain asbestos. Other materials that have a historical basis may also be presumed to contain asbestos, like fire doors.

Where can I expect to find asbestos?

Asbestos is found in sprayed-on fireproofing, thermal system insulation (boilers, steam pipes), surfacing materials (plaster, stucco), ceiling and vinyl floor tiles, cement pipe and sheet roofing felts and shingles, fire-resistant drywall, drywall joint compounds, mastics, and sound absorption products. The Consumer Product Safety Commission has banned the use of asbestos in many home products for several decades, and other regulatory agencies like the EPA and OSHA also regulate asbestos in the work environment. However, other countries are not as strict as the U.S. and many imported materials still contain asbestos.



Spray-on Fireproofing



Thermal System Insulation & Pipe Cement



Plaster / Stucco

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Ceiling Tiles



Vinyl Floor Tiles and Mastic



Sheetrock & Drywall Joint Compound



Roofing Felt & Shingles

Who may be exposed to asbestos?

Department of Administration employees should not be exposed to asbestos through their routine work practices. However, employees, such as in Facilities Management's Building Maintenance, Building Systems and Energy/Environmental teams, the Custodial Floor crew or Division of State Information Technology telecommunications installers have activities that bring them into closest contact with ACM. Other employees may also need to be aware of specific locations where asbestos is known or suspected to exist so they know to use proper work practices to prevent from disturbing or damaging the ACM.

What should I do if I think any materials in my work area contain asbestos?

- You should always check the O&M manual or Asbestos Summary Log to determine if your work area contains ACM/PACM prior to beginning work.
- Otherwise, stop your work then immediately notify your supervisor and the Asbestos Control Manager who will inspect the area and check records to determine if the material has to be tested, repaired or removed, as required. Do not proceed without authorization and further instruction.

Is testing for asbestos in building materials necessary?

No. Historical evidence has proven that certain materials usually contain asbestos so are considered as PACM. However, the only way to prove a *suspect* material does *not* contain asbestos is to test it. The cost of testing could save significant removal and disposal costs for the Department of Administration if the PACM tests negative.

How long will it take to get back asbestos test results?

The Asbestos Control Manager has several asbestos-certified contractors on call (indefinite delivery contracts) available to inspect, test, and to remove or repair ACM/PACM. There is no field-testing that will tell us that a

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material does or does not contain asbestos. Samples have to be taken and sent to a laboratory. Results normally take a week but they can also be expressed overnight so may only take a few days.

How am I to do my work if there is ACM/PACM?

After determining that materials in your assigned work area contain asbestos then the Asbestos Control Manager will hire an asbestos-qualified contractor to remove enough of the material for you to do your work. After your work is completed, the replacement materials should be asbestos-free.

Why don't we just remove all asbestos?

As long as the ACM is in good condition and remains undamaged there is very little chance of an asbestos exposure. Almost all of the ACM has been removed where our maintenance crews need to do preventive and corrective maintenance. Replacement materials manufactured with no asbestos usually are labeled "asbestos free." Additionally, so much asbestos was originally installed that removal would take years, be very costly, would unnecessarily interfere with our normal operations and the cleanup itself would expose workers – all reasons why the EPA does not advocate such a clean up process.

If I can't see it, how do I know where asbestos is located?

- An Operations & Maintenance (O&M) manual for each building includes construction records, professional asbestos testing and laboratory analysis. These manuals are located in Room 208 of the Forsythe Building, 915 Main Street in Columbia.
- Since the O&M manuals are reference books and are not to be removed, an Asbestos Summary Log is available for employee field use.
- Questions about asbestos can be directed to JP Gouffray, Department of Administration Asbestos Control Manager and Inspector.

How could I be exposed to asbestos?

Asbestos can be released when the ACM becomes damaged by:

- Physical contact, i.e., scraped, gouged, crushed, and use of portable power tools
- Air erosion, i.e., high velocity air flow
- Vibration, i.e., from water/air pressure, loud noises, nearby vehicle traffic
- Water, i.e., rain or water leaks

What does asbestos damage look like?

The damaged material in which asbestos is contained and or its covering can be:

- Deteriorated, i.e., pieces hanging or fallen down, crumbled or pieces of debris or dust below from vibrating equipment, pipes, etc.
- Delaminating, i.e., the layers in a material have come apart (flaking, blistering), are curling or the glue is no longer adhering and has separated, i.e., floor tile that has broken or come loose
- Water damaged ceiling tile, sheet rock, and insulation or floor tiles
- Torn from by being struck
- Debris of unknown contents

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Deteriorated Pipe Insulation



Damaged Vinyl Floor Tile



Water Damaged Ceiling tile



Delaminated Plaster



Water Damaged (Molded) Sheetrock



Cracks in Sheetrock/Plaster

What should I do if I see damaged ACM/PACM?

If you see or suspect that ACM has been damaged, or even if you do not know if the debris contains asbestos:

- Stop work. Immediately notify your supervisor and the Asbestos Control Manager or Inspector.
- The Asbestos Control Manager is to report a “major release” (more than 3 square or linear feet) of friable ACM to the SC Dept. of Health and Environmental Control (DHEC)
- Cordon off the area, i.e., with barriers and warning tape and/or signs.
- Wait for further instruction from the Asbestos Control Manager.

How do I keep from disturbing or damaging ACM/PACM?

- Do not drill, grind, sand, cut, saw, abrade, break, core, puncture or otherwise damage ACM/PACM
- Avoid contact, i.e., do not touch, hang or lean ladders, brooms or other objects, tools or equipment onto, from or against ACM/PACM
- Only trained and authorized personnel are to work with or clean up ACM/PACM, i.e., a SC-licensed asbestos contractor.

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Can I work with asbestos containing material?

Refer to the Asbestos Summary Log. Employees are allowed to engage in work when the log indicates there is *NO ASBESTOS* (-) in the material in question.

However, if the log indicates there is asbestos (+) present in the material in question or if there is no testing indicated (a blank) then workers are to *not* engage in work involving that material until after contacting their supervisor and/or the Asbestos Control Manager and receiving approval. Since the Asbestos Summary Log is not as detailed as the O&M books, the Asbestos Control Manager can refer to the O&M book then indicate it is safe to work with the material in question. For example: A building has three different ceiling tiles. The O&M Manual will list test results for each of the three types of ceiling tile. Type 1 ceiling tile tested positive (+) for asbestos while Types 2 and 3 tested negative (-). However, the Asbestos Log will only list "Ceiling Tile" as one category where all three types of tile are looked at collectively. A negative result in the log means all of that material in the building does not contain asbestos whereas a positive result means that at least one of the three types of ceiling tile contains asbestos. If the material in question is Type 2 ceiling tile and the O&M book indicates that only Type 1 ceiling tile contains asbestos, the Asbestos Control Manager will indicate work with Type 2 ceiling tile is safe.

A special consideration is mastic (glue) and drywall joint compound. Mastics are used to join together sheets of insulation around ductwork and piping, and to secure vinyl flooring and base molding. Drywall joint compound is used to fill in the seams between sheets of drywall (sheetrock). The test results for asbestos for both the mastic and the material being glued and the drywall joint compound and the sheet rock must be looked at together due to their bonding. For instance, the sheet rock may test negative (-) for asbestos while the drywall joint compound tests positive (+) for asbestos. Therefore their debris must be considered to contain asbestos (+).

The Asbestos Control Manager will engage a contractor qualified in asbestos abatement (repair or removal) for any materials presumed to contain asbestos or actually contain asbestos.

What housekeeping procedures can I use in areas that have ACM/PACM?

- Avoid dry sweeping, dusting or using compressed air on dust or debris suspected or known to contain asbestos
- Use wet clean-up methods, i.e., wipe with damp rag, wet mop or steam clean carpets
- Vinyl and asphalt flooring can be maintained by:
 - Stripping finishes using low abrasion pads at speeds less than 300 rpm and wet methods using cleaning solutions and/or waxes
 - Burnishing or dry buffing may be done if the flooring has sufficient finish so the pad does not contact the asbestos containing floor material
- Use a vacuum with a high efficiency particulate air (HEPA) filter to collect dust. HEPA filters are not washable and reusable. Dispose of the HEPA filter and debris in a leak tight container.
 - A recommended technique is to take a trash can liner and don like a glove, grab the filter or vacuum cleaner bag and as you remove it cover it with the bag.
- Contact Asbestos Control Manager for proper disposal of ACM debris

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Damp Cloth / Spray Dusting



Wet Mop



Wet Vac / Steam Clean / Shampoo



Use Stripper / Wax Solution

Will wearing a dust mask protect me from asbestos?

Unlike a respirator, you may wear a dust mask without a medical evaluation, fitting or special training. However, a dust mask is not designed to protect you from breathing in asbestos or toxic fumes. **Warning:** Disposable respirators and dust masks look alike but do not provide the same levels of respiratory protection.



Dust Mask



Respirator (Disposable)



Half-Face Respirator

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Is anything being done to protect Department of Administration employees, tenants and visitors from asbestos exposure during renovations?

- Besides our asbestos safety policy and employee awareness training, work practices include hiring an asbestos-qualified contractor to remove, repair or contain asbestos, and clean the area before you can do your work.
 - o Contractors hired to do work involving ACM are to use physical barriers (such as sheets of plastic), warnings (such as signs and warning tape prohibiting entry except to authorized workers), and vacuum capture systems to protect anyone not involved in the asbestos work. ACM debris must be disposed of using special procedures and only in asbestos-authorized waste sites.

“Authorized Personnel” does not include you!

(Department of Administration employees normally are not authorized to enter asbestos work areas)



- Much asbestos in our facilities was abated (repaired or removed) in the late 1980s and 90s however small abatement projects still occur, as required. Abatement, renovations and demolition work must have DHEC approval prior to the planned work. ACM waste must also be disposed of in DHEC approved landfills.
- Any ACM that remains must:
 - o Have signs posted warning of the ACM
 - o Be regularly inspected. If it has been damaged or deteriorated then it has to be abated.

Can I work, sweep or dust in areas where there are asbestos warning signs?

Even if there is ACM in your work area but it is in good condition then sweeping and dusting can be used if wet methods are impractical. However, repair, removal or replacement of ACM by Department of Administration employees is prohibited.

Why are asbestos warnings in my area?

- Asbestos warning labels are usually placed where there is likelihood to cause damage to ACM; they are to warn you to take care when doing maintenance or housekeeping so as not to damage known or presumed ACM.
- Warning signs:
 - List all materials confirmed or presumed to contain asbestos in the building
 - Are posted at entrances to Mechanical and Janitorial Rooms in the building to make employees aware of the ACM/PACM to avoid inadvertent damage.
 - Restrict entry to regulated work areas to authorized work personnel only



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Why do I have to have Asbestos Awareness training and how often?

- The Department of Administration is committed to making you aware of potential hazards, such as asbestos, in the work place and ways you can protect yourself.
- Your fellow employees and managers asked for information about asbestos.
- The OSHA standard on protecting employees from asbestos, 29 CFR 1910.1001, requires all maintenance, housekeeping staff and other affected employees to have Asbestos Awareness training upon initial hire and annually thereafter.