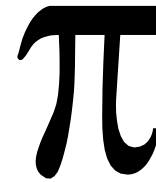


What is Asbestos?

- The word "asbestos" comes from the Greek meaning "inextinguishable."



- Asbestos is a serious health hazard commonly found in our environment today.
- Employees who may work in buildings that contain asbestos should know where it is found and how to avoid exposure.

Asbestos History

- Many people believed asbestos a "miracle" product of the 20th century.... **That couldn't be further from the truth.**
- **1st Century AD** Pliny the Elder notes that slaves working in asbestos mines die young of lung disease.
- The Greeks recognized that not everything about asbestos was good.
 - Greek and Roman scientists recognized asbestos caused "sickness of the lungs" in the slaves that wove asbestos into cloth or mined the mineral.
 - Egyptian mummy's were wrapped in asbestos containing fabric

Six Types of Asbestos

Asbestos is composed of six different types of natural minerals:

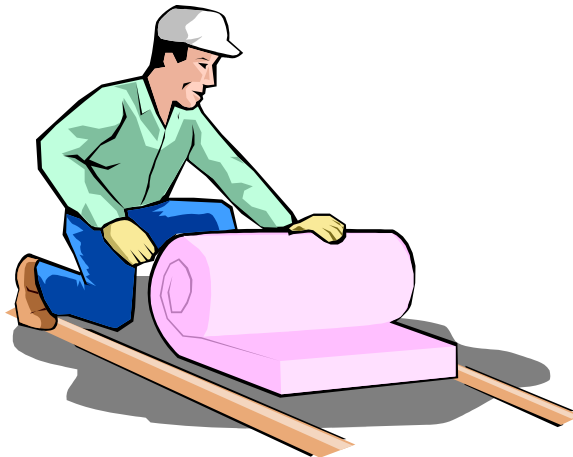
- Chrysotile
- Amosite
- Crocidolite
- Tremolite
- Actinolite
- Anthophyllite

Most common types



Asbestos Facts

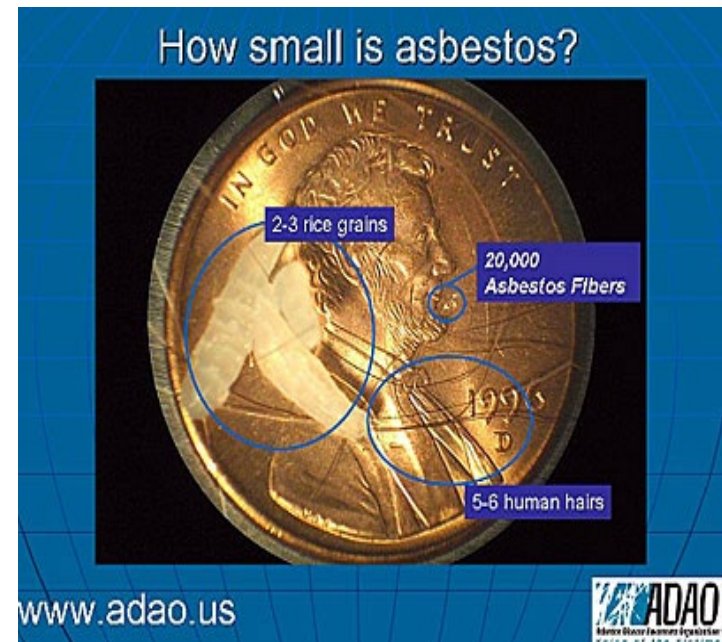
- Asbestos fibers are also virtually indestructible.
- Resistant to chemicals and heat, and they are very stable in the environment.
- Do not evaporate into air or dissolve in water, and they are not broken down over time.
- Asbestos is probably the best insulator known to man.



Asbestos Facts

Usually asbestos is mixed with other materials to actually form the products. Floor tiles, for example, may contain only a small percentage of asbestos.

Depending on what the product is, the amount of asbestos in asbestos containing materials (ACM) may vary from 1%-100%.



Asbestos Exposure

1.3 million workers are exposed in the U.S. – primarily in the construction industry.

Asbestos removal and building renovation & demolition have the greatest exposures.

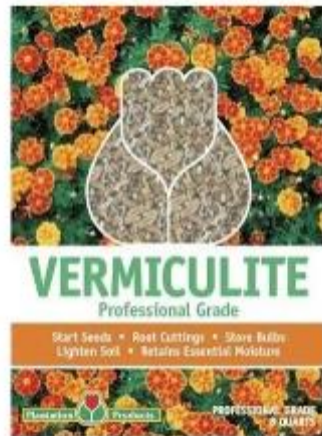


Exposure in general industry:

- manufacture of asbestos products
- automotive brake and clutch repair
- Housekeeping and custodial work

Where is Asbestos Found?

- Adhesives, Cements, Mortar, Sealers
- Millboard
- Brake linings and clutch pads
- *Let's talk about vermiculite!*



Vermiculite

- A mine near Libby, Montana sold 70% of all vermiculite in the U.S. from 1919 to 1990.
- There was a sediment of asbestos at that mine, so the vermiculite from Libby was contaminated with asbestos.
- Libby vermiculite was used in the majority of vermiculite insulation in the U.S. as the brand name “Zonolite”

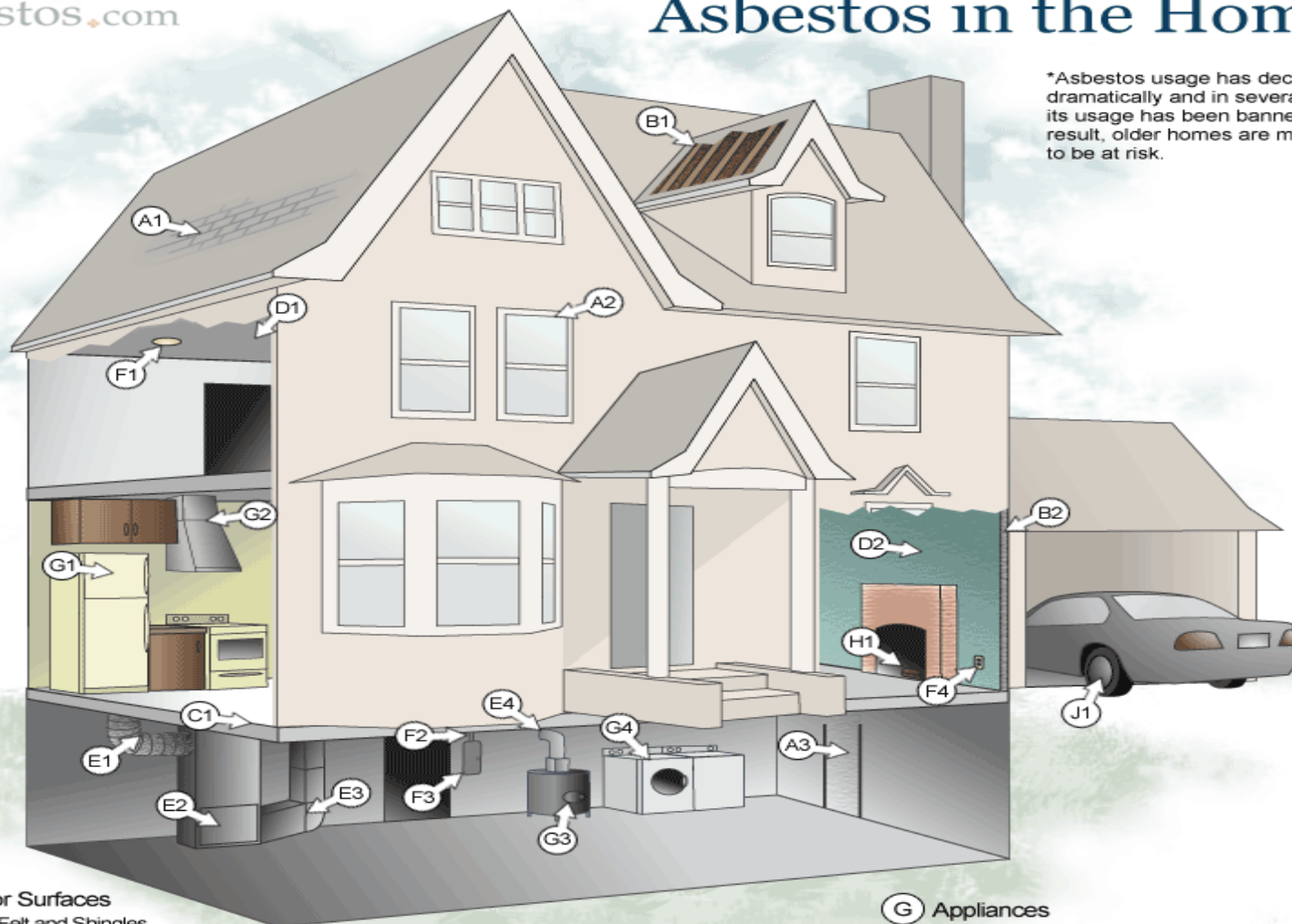
More Asbestos Loaded Products???

- Cement Pipes, Cement Boards, Sheets, Plastics
- Clay, Compounds, Paints, Plasters
- Electrical, Mechanical Products
- Home Use Products
 - Cigarette Filters
- Pipe Covering
- Protective clothing



Asbestos in the Home

*Asbestos usage has declined dramatically and in several cases, its usage has been banned. As a result, older homes are more likely to be at risk.



- A Exterior Surfaces**
1. Roof Felt and Shingles
 2. Window Putty
 3. Cement Asbestos Board Siding / Undersheeting

- B Insulation**
1. Vermiculite Insulation
 2. Batt Insulation

- C Flooring**
1. Vinyl Asbestos Flooring Material

- D Interior Surfaces**
1. Sprayed-on Ceiling Material
 2. Textured Paint

- E Boilers, Heating and Piping**
1. Heat Source Covering
 2. Door Gaskets
 3. Duct Lining
 4. Wall Gaskets and Lining

- F Electrical Equipment**
1. Recessed Lighting
 2. Wiring Insulation
 3. Fuse Boxes
 4. Outlets

- G Appliances**
1. Refrigerators / Freezers
 2. Range Hoods
 3. Woodstoves (Heat Reflectors)
 4. Clothes Dryers
- * Not Shown: Dishwashers, Toasters, Slow-cookers, Portable Heaters, Hair Dryers

- H Miscellaneous**
1. Fireplace Logs

- J Automotive**
1. Brake Linings, Gaskets, and Clutch Facings

Asbestos Occupations

Just to name a few:

- Plumbers
- Demolition
- Construction / remodeling
- Roofers
- Mechanics
- First Responders



<http://www.mesothelioma.com/asbestos-exposure/occupations/>

Health Affects of Asbestos Exposure

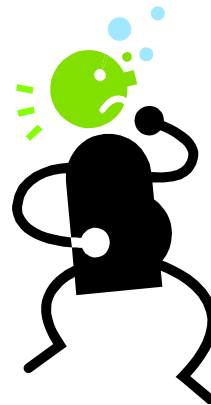
- Asbestos exposure is the only confirmed cause of mesothelioma, a fatal form of cancer that typically manifests in the lungs
- Lung Cancer
- Asbestosis

Could take 20 years for one asbestos fiber to turn into one of these deadly diseases

Always protect yourself if you suspect asbestos

Signs and Symptoms of asbestosis can include:

- Shortness of breath is the primary symptom
- A persistent and productive cough (a cough that expels mucus)
- Chest tightness
- Chest pain
- Loss of appetite
- A dry, crackling sound in the lungs while inhaling.



Cigarette Smoke and Asbestos



- Cigarette smoke and asbestos together will increase your chances of getting lung cancer.
- If you have been exposed to asbestos you should stop smoking.
- This may be the most important action that you can take to improve your health and decrease your risk of cancer.



How to Avoid Asbestos Exposure

- If you do not know that a building material is asbestos free.....DOT DISTURB IT.

Never

| Drill | Break |
|--------|---------|
| Hammer | Damage |
| Cut | Move |
| Saw | Disturb |

How to Avoid Asbestos Exposure

- Personnel should understand how to protect themselves
- In the event that asbestos fibers become airborne and may be inhaled
- Wear a mask to prevent inhalation of asbestos fibers
- Safety gear such as gloves or booties that cover your shoes should be worn, to prevent the spread of asbestos fibers to other areas

Good Housekeeping Rules

- Custodians should never sand or dry buff asbestos containing floor tiles
- Broken and fallen ceiling tiles should be left in place until identified
- Broken and damaged asbestos floor tiles must also be removed by asbestos abatement workers
- Be aware of where asbestos may be hiding and takes actions not to disturb

Asbestos Emergency Kit

- Gloves
- Protective eyewear
- Disposable clothing
- Booties
- Garbage bags
- Water bottle
- Important Telephone numbers

