

Tracing the White Enemy: A Brief Guide to Recognizing Installed Asbestos in Buildings

Susana Muhlmann

*Architect, Asbestos Removal Procedures and Legal Aspects Technical Advisor,
Government of Buenos Aires, Argentina*

Abstract

Since Hellenic times asbestos has been considered a magical material. It is a mineral easy to find and extract, perfect for thermal and acoustic insulation, fireproof and extremely durable.

There is not another material that fulfils all the properties of asbestos simultaneously; therefore, it is reasonable that asbestos had been included for centuries in so many structures. However, with the progress of time, scientific discoveries have revealed that with respect to people's health asbestos is as dangerous as it is magical.

That is why we all, doctors, lawyers, builders, experts, architects, government representatives and asbestos victims, among others, attend congress after congress in order to find solutions for this major issue.

Nevertheless, in the meantime, buildings contain installed asbestos which lots of people are permanently in contact with, having not a clue about the risk posed to their health.

Having information is the first step in discovering and providing proper protection from visible, invisible or hidden environmental enemies. Step by step, day after day working together, we can draw closer to the natural state of health we all deserve.

It is the aim of this workshop to provide a brief guide to the installed asbestos around us; its appearance, where it can be found and what to do when it is found.

Following the sketch of a hypothetical building we shall go through an imaginary survey toward potential asbestos hotspots, learning how to recognize the textures, colours and shapes it can take on for different applications and uses.

Introduction

Since Hellenic times asbestos has been considered a magical material. It is a mineral easy to find and extract, perfect for thermal and acoustic insulation, fireproof and extremely durable.

There is not another material that fulfils all the properties of asbestos simultaneously; therefore, it is understandable that asbestos had been included for centuries in so many structures. However, with the progress of time, scientific discoveries have revealed that regarding people's health, asbestos is as dangerous as it is magical.

All around the world all kinds of buildings have installed asbestos, which lots of people are permanently in contact with, having not a clue about the risk posed to their health. Having information is the first step in discovering and providing proper protection from visible, invisible or hidden environmental enemies.

Asbestos has multiple uses in construction and buildings, due, precisely, to the varied properties it has.

knowing the properties, we can understand the uses

knowing the uses, we can trace it in any building

The following is a brief guide for asbestos recognition, where it is, its appearance, and in the end, what to do when the white enemy is traced.

What is asbestos?

- Asbestos, which was already known in prehistoric times (1800 BC), is a material which never burns, rots nor corrodes. It insulates from cold and noise, it possesses both high elasticity and tensile strength.
- In short, asbestos materials are virtually indestructible.
- Because of its excellent characteristics, the mineral asbestos has been used in countless ways in technologies of every kind.

Health hazards

There are two main types of asbestos: serpentine (chrysotile variety) and amphibole (the other varieties). The extreme jeopardy for the breathing system is caused by the bio-persistence of the fibers in the lungs, which means that the fibers are not eliminated and can stay intact for many years, more than a hundred in some cases. This bio-persistence gives the human organism time enough to develop cancerous formations. It is also fully demonstrated that there is no minimum number of fibers required to provoke damage. That is why it is so important to learn how to recognize asbestos... and to know what to do then.

Where asbestos can be found

Asbestos is highly versatile. When it is extracted from the earth and separated from the rest of the minerals, the results are microscopic fibers, which look like powder; like dry plaster therefore, it can be combined with a very wide range of materials. That is why it can be found in so many different elements and parts of a building.

As a rule, a first distinction is drawn between weakly bound asbestos products such as

- asbestos sprayed materials,
- asbestos insulating board,
- asbestos fabric,

and strongly bound asbestos products such as

- asbestos-cement sheets,
- corrugated asbestos-cement sheets,
- asbestos-cement pressure pipes.

Then, specifically for the construction field, in order to start recognizing asbestos in a building, we need to go step by step, following a simple plan: to go from the outside, to the inside, and from the top to the bottom, always looking for the uses the properties allow. In this way we start looking at:

Asbestos on Exteriors

- **As fireproof and waterproof:**
 - Façade tiles
 - Asphalt roof tiles
 - Asbestos rolls
 - Fiber cement sheets
 - Old siding
 - Textured walls
 - Tile and pipe tar sealing
 - Tar or cement gaskets
 - Caulking
 - Pavement

Asbestos on Interiors

- **As fireproof and waterproof:**
 - Textured walls and ceilings
 - Floor vinyl tiles
 - Caulking
- **Asbestos as a fireproof barrier:**
 - Covering of air conditioning conduit (also thermal insulation)
 - Covering of metallic structures
 - Covering of walls, ceiling, columns
 - Fireproof curtains in theatres
 - Under countertops
- **Asbestos as acoustic insulation:**
 - Sprayed blue asbestos on walls, ceilings, columns and beams
 - Acoustic tiles on ceilings and walls
 - Non textured walls and ceilings
- **Asbestos as thermal insulation - Heating systems:**
 - Coating for waterproof and thermal insulation on structural metal elements, metallic furnaces, boilers and pipes
 - Radiators - sealing insulation

These are just a few general tips on asbestos recognition. Real training requires knowledge of many more uses to which asbestos has been applied; there are even unrecorded unique uses, dependant, as always, on the versatility of asbestos and its properties.

Nevertheless, asbestos recognition is the first step. Then, when asbestos is found it is very important to follow certain rules in order both to protect the people that might be in contact with it as well as to make a plan to deal with it safely.

When the white enemy is traced

1. Keep calm

Usually the best thing is to leave asbestos material that is in good condition alone.

2. Asbestos is only dangerous when it can be inhaled

Generally, material in good condition will not release asbestos fibers. There is no danger unless fibers are released and inhaled into the lungs.

3. Do not touch anything and make sure that nobody else will touch the asbestos or get into the asbestos area, particularly kids.

4. Close the place (if possible) and put up warning signs

If the place cannot be completely closed, restrict access to as few people as possible, and reduce activities as much as possible until you have a professional opinion.

5. Call a professional

First, to confirm the suspected material is asbestos, and to give you the proper instructions to keep you safe until you have confirmation. Then, if it is, to handle the asbestos in a professional way, meaning, through a process designed in such a way that no asbestos fibers are released into the air, or that they are reduced to the lowest possible level with existing technology.

6. Read, follow and transmit the EPA recommendations

If you are not familiar with asbestos safe procedures, you can find helpful material at the following link: <http://www.epa.gov/asbestos/ashome.html#4>. Until you get professional advice, it will tell you what to do, and mainly, what NOT to do, when you detect material suspected of containing asbestos, and keep you and yours safe, and tranquil, which is the main goal of this presentation.

