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Conservation**

**Division of  
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## Asbestos Containing Materials

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### Description

Asbestos is a generic term for a group of six naturally-occurring fibrous minerals. The basic unit of asbestos-class mineral (amosite, chrysotile, tremolite, actinolite, anthophyllite and crocidolite) is the silicate ( $\text{SiO}_4$ ) group. The most common mineral type is white (chrysotile), but others may be blue (crocidolite), gray (anthophyllite), or brown (amosite). These minerals are made up of long, thin fibers that appear somewhat similar to fiberglass.

It is impossible to identify asbestos simply by a visual inspection. The only certain method of identifying asbestos is through laboratory examination using polarized light microscopy or electron microscopy.

Asbestos fibers are basically inert, or nearly so. They do not evaporate, dissolve, burn or undergo significant reactions with other chemicals. Asbestos is also a good insulating material. Because of these properties, asbestos fibers have been used in a wide range of products, mostly in building materials, friction products and heat-resistant fabrics. Because the fibers are so resistant to chemicals, they are also very stable in the environment, i.e. they are not broken down over time.

### Health Concerns

Information on the health effects of asbestos in humans comes mostly from studies of people who had inhaled high levels of asbestos fibers in the workplace. These asbestos workers were found to have increased chances of getting two types of cancer, lung cancer and mesothelioma, both of which are usually fatal. These diseases do not appear immediately, but develop only after a period of between 10 and 30 years. Members of the public who are exposed to lower levels of asbestos may also have increased chances of getting cancer, but the risks are usually small and are difficult to measure directly.

Besides causing cancer, breathing asbestos can also cause a slow accumulation of scar-like tissue in the lungs, called asbestosis. This scar-like tissue does not expand and contract like normal lung tissue, and so breathing becomes difficult, and can eventually lead to disability or death. However, asbestosis is not usually of concern to people exposed to low levels of asbestos.

## Removal

The potential for an asbestos containing material (ACM) to release fibers depends primarily on its condition. If the material, when dry, can be crumbled by hand pressure - a condition known as “friable” - it is more likely to release fibers, particularly when damaged. However, as long as the surface is stable and well-sealed against the release of its fibers, the material is considered safe until damaged in some way. Removal is usually the last choice among alternatives, because it poses the most risk of fiber release, if not done properly. EPA only requires asbestos removal in order to prevent significant public exposure to asbestos, such as during building renovation or demolition. Materials containing more than 1% asbestos are regulated by the federal government under 40 CFR 61.141. Regulated asbestos containing material (RACM) usually refers to friable ACM and should only be removed by professionals certified in asbestos abatement. Removal requires special equipment and detailed training. Contact the Alaska Office of Mechanical Inspection, (907) 269-4925, for a list of contractors licensed to remove asbestos in Alaska or for a training schedule for asbestos abatement certification.

ACM that is typically nonfriable such as floor tile, roofing material, packing and gaskets should be removed before demolition only if it is in poor condition and has become friable. If the non-friable ACM is subjected to sanding, grinding or abrading as part of the demolition then asbestos fibers may be released and precautions must be taken to prevent inhalation exposure. If a building is demolished by burning, then all ACM - friable and nonfriable - must be removed prior to demolition.

RACM wastes must be thoroughly wetted, placed in leak-tight containers, and labeled with a health warning that states:

**CAUTION**  
**Contains ASBESTOS**  
**Avoid opening or breaking container**  
**Breathing asbestos is hazardous to your health**

or

**CAUTION**  
**Contains ASBESTOS**  
**Avoid opening or breaking container**  
**Breathing asbestos dust may cause serious bodily harm**

Containers may be barrels, drums or double four-mil or thicker plastic bags. Plastic lined fiber and steel containers may also be used. Non-friable ACM can be taken to a landfill without being bagged, although loads should be covered or contained to prevent littering during transport.

## Disposal

Disposal options should be explored soon after asbestos waste is identified. RACM must be taken to a landfill permitted for asbestos disposal. Many landfills have special packaging requirements that the waste generator must be aware of before any asbestos is removed and containerized. Some boroughs may not accept asbestos generated outside their boundaries. Nonfriable ACM may be taken to any permitted landfill.

For information on which landfill have current permits allowing the disposal of ACM contact the nearest office of the Alaska Solid Waste Program (see first page).

No permit is necessary for the storage of asbestos, however, once the waste arrives at a disposal site it must be buried as soon as possible or kept within a secure building or enclosed vehicle which is not accessible to the public. Vehicles used for transport of containerized asbestos waste must have an enclosed carrying compartment or utilize a covering sufficient to contain the transported waste, prevent damage to the containers, and prevent fiber release.

The landfill receiving the asbestos waste must be notified in advance and a waste shipment record must be filled out for each load and signed by both the shipper and receiving party. The asbestos contractor is responsible for off-loading the wastes in the disposal area designated for asbestos waste. The landfill operator supervises the disposal and maintains a log of the source and quantity of asbestos delivered. Loads should be inspected to verify that friable asbestos waste is properly contained in undamaged, leak-tight containers and labeled appropriately. Any discrepancies must be reported to the EPA Region 10 NESHAP Program (call 1-800-424-4372). The landfill operator must cover the wastes with six inches of soil or other material by the end of the working day.