



Vermiculite

Updated

September 2009

IT'S YOUR HEALTH



Vermiculite Insulation Containing Amphibole Asbestos

The Issue

Some vermiculite insulation may contain amphibole asbestos fibres. These products can cause health risks if disturbed during maintenance, renovation or demolition. However, there is currently no evidence of risk to your health if the insulation is sealed behind wallboards and floorboards, isolated in an attic, or otherwise kept from exposure to the interior environment.

Background

Vermiculite is a mica-like mineral mined around the world and used in a variety of commercial and consumer products because it is fire-resistant and has good insulation qualities. Of concern is vermiculite ore produced by the Libby Mine in Montana from the 1920's to 1990. It was sold as Zonolite® Attic Insulation and possibly other brands in Canada during that time. Vermiculite

from the Libby Mine may contain amphibole asbestos. The Libby Mine supplied the majority of the world market in vermiculite-based insulation.

Products made from vermiculite ore produced by the Libby Mine were not widely used after the mid-1980's and have not been on the market in Canada since 1990. Not all vermiculite produced before 1990 contains amphibole asbestos fibres. However, to be safe and in the absence of evidence to the contrary, it is reasonable to assume that if your building has older vermiculite-based insulation, it may contain some amphibole asbestos.



Photo courtesy of CMHC



Photo courtesy of EPA

The Health Risks Of Vermiculite Containing Amphibole Asbestos

Although the overall percentages of amphibole asbestos in bulk vermiculite are very low, the airborne percentages

can increase if the material is disturbed. Asbestos poses health risks only when fibres are present in the air that people breathe. If asbestos fibres are enclosed or tightly bound in a product, for example in asbestos siding or asbestos floor tiles, there are no significant health risks. How exposure to asbestos can affect you depends on:

- the concentration of asbestos fibres in the air;
- how long the exposure lasted;
- how often you were exposed;
- the size of the asbestos fibres inhaled; and
- the amount of time since the initial exposure.

When inhaled in significant quantities, asbestos fibres can cause asbestosis (a scarring of the lungs which makes breathing difficult), mesothelioma (a rare cancer of the lining of the chest or abdominal cavity) and lung cancer. The link between exposure to asbestos and other types of cancers is less clear.

Based on current information, there is no evidence that vermiculite currently available for horticultural purposes (e.g. potting plants) is a health risk when used as directed.

Minimizing Your Risk

The best way to minimize your risk of amphibole asbestos exposure is to avoid disturbing vermiculite-based insulation in any way. If vermiculite-based insulation is contained and not exposed to the home or interior environment, it poses very little risk.

If you are concerned that your home may contain vermiculite-based insulation visit the [Need More Info?](#) section in this article or the [Health Canada Web site](#) to get the most up-to-date information as it becomes available.

If you know you have vermiculite-based insulation in your attic, take these precautionary steps.

- Do not allow children to play in an attic with open areas of vermiculite-based insulation and make sure anyone working in the attic knows about the possible presence of amphibole asbestos.
- Do not use the attic for storage if retrieving items from it may disturb the insulation.
- If you must go into the attic, walk on boards in order to minimize disturbance of the insulation and use an appropriate respirator mask. Do not remain in the attic any longer than is necessary.
- Common dust masks are not effective against asbestos fibres. For information on appropriate respirator masks, see the [Need More Info?](#) section.
- If you have vermiculite-based insulation and you decide to have it removed, speak to trained and qualified asbestos removal professionals to handle the insulation removal. They can be found by looking up experts in "asbestos abatement /removal." NEVER attempt to remove the insulation yourself.
- If you plan to remodel or renovate ---for instance, by re-insulating your attic--- in a manner that would disturb the vermiculite, speak to professionals who are trained and qualified to handle asbestos removal before proceeding with the work.
- Seal all cracks and holes in the ceilings of the rooms below the insulation (for example, apply caulking around light fixtures and the attic hatch) to prevent insulation sifting through.

- If you suspect you have vermiculite-based insulation in your walls, as a precautionary step, seal all cracks and holes. For example, apply caulking around window and door frames, along baseboards and around electrical outlets.

What To Do If You Suspect You Have Been Exposed To Asbestos

Asbestos related illnesses are usually associated with frequent and prolonged exposure to asbestos. The time it takes to develop a disease from exposure to asbestos is usually long - up to decades. However, some steps you can take if you have concerns about exposure to asbestos are:

- Talk to your health care provider;
- Avoid or minimize further exposure to any form of asbestos; and
- Stop smoking and avoid second hand tobacco smoke and other irritants that could affect your lungs. Exposure to cigarette smoke and asbestos greatly increases your chances of developing lung cancer.

Need More Info?

For the most up-to-date information on this issue, call 1-800-443-0395

For more information on asbestos, visit the following sites:

The Chemical Substances Portal at: www.chemicalsubstanceschimiques.gc.ca

It's Your Health article *The Health Risks of Asbestos* at: www.hc-sc.gc.ca/hl-vs/iyh-vsv/environ/asbestos-amiante-eng.php

The Canada Mortgage and Housing Corporation publication on "Asbestos" at: www.cmhc-schl.gc.ca/en/co/maho/yohoyohe/inaiqu/inaiqu_001.cfm



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For information on general safety tips and guidelines for working with different types of insulation and other materials, visit:

Natural Resources Canada publication, *Keeping the Heat In*, Chapter II, Part IV, Health and Safety Considerations at: <http://oee.nrcan.gc.ca/residential/personal/heat/keeping-heat-in-chap2.cfm#part4>

For specific information on safety precautions and acceptable respirator masks when working with asbestos, go to:

Canadian Centre for Occupational Health and Safety (CCOHS) Respirator page at: www.ccohs.ca/oshanswers/prevention/ppe/respslct.html

For more information on workplace safety, visit the Environment and Workplace Health, Occupational Health and Safety Web section at: www.hc-sc.gc.ca/ewh-semt/occup-travail/index-eng.php

For more information on vermiculite and asbestos visit, the following Web sites:

Natural Resources Canada publication on Chrysotile Asbestos at: www.nrcan-nrcan.gc.ca/mms-smm/busi-indu/cmty-amc/content/2006/20.pdf

Health Canada Consumer Product Safety Web section at: www.hc-sc.gc.ca/cps-spc/index-eng.php

Health Canada Environmental Contaminants Web section at: www.hc-sc.gc.ca/ewh-semt/contaminants/index-eng.php

Agency for Toxic Substances and Disease Registry (ATSDR) at: www.atsdr.cdc.gov

For more information on the Hazardous Products Act (HPA) and asbestos, see Justice Canada's Web site at: <http://laws.justice.gc.ca/en/H-3/>

For more photographs of vermiculite insulation and additional information regarding vermiculite containing asbestos, please visit the US EPA's Asbestos site at: www.epa.gov/asbestos/

For additional articles on health and safety issues go to the *It's Your Health* Web section at: www.healthcanada.gc.ca/iyh

You can also call toll free at 1-866-225-0709 or TTY at 1-800-267-1245*