



SAFE WORK



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Vermiculite Insulation - Asbestos Contamination

Recent concerns have focused on a potential health risk posed by vermiculite sold as Zonolite Attic Insulation and possibly other brands in Canada. The vermiculite ore, mined at the Libby Mine in Montana (prior to its close in the 1990's), may contain small amounts of asbestos contamination.

Vermiculite is a mica-like mineral mined around the world. Vermiculite is light, has good insulation properties, and is also fire resistant. Vermiculite insulation in the loose form is light brown/grey/gold in color and is a pebble-like material ranging in size from 2 – 10 millimeters in diameter.



(Source of photos: EPA)

Health Risks of Vermiculite Containing Asbestos

If loose fill vermiculite containing asbestos is disturbed, asbestos fibers may be released into the air. The inhalation of asbestos fibers has been known to cause health problems in some of those individuals exposed. Asbestos can cause mesothelioma (cancer of the lining of the abdominal or chest cavity), lung cancer and asbestosis (scarring of the lungs making breathing difficult). An asbestos related illness usually will not appear until 15 – 20 years after the initial exposure. Some factors that increase the risk of disease development include the number of asbestos fibers in the air and the frequency and duration of a person's exposure. Smoking will greatly increase the risk of developing an asbestos related illness.

The best way to reduce the risk of asbestos exposure is to **avoid disturbing the vermiculite based insulation** in any way. If this insulation is sealed behind floorboards, wallboards, contained within the cinder block wall and isolated in an attic, the risk of individual exposure is reduced. It is recommended that all loose-filled insulation visually identified as vermiculite and installed prior to 1990 be treated with precautionary measures to protect one from breathing airborne fibers and to protect surrounding areas from contamination by asbestos fibers.

If a building owner hires a contractor to remove vermiculite insulation, they must ensure the contractor is experienced in asbestos abatement procedures. **Building owners should not attempt to remove this type of insulation themselves without knowledge of asbestos removal procedures, specific equipment and training.**

Reducing the Risk

- Avoid entering the attic space
- Do not store any items in the attic
- If the attic must be entered, ensure appropriate personal protective equipment is worn (e.g. N, P, or R-100 respirator, protective clothing, protective gloves)
- Ensure that there is no cross contamination between the attic space & other parts of the building. Seal around electrical outlets, light fixtures, attic hatch, windows and door frames etc.
- Any renovations and/or installation or repair to electrical wiring in the attic must ensure that the vermiculite is not disturbed. This may necessitate the complete removal of the vermiculite prior to any renovations being undertaken.

Collecting a Sample for Asbestos Analysis

If a building owner chooses to test the vermiculite for asbestos content, an N, P, or R-100 respirator should be worn when the sample is taken. Avoid sampling at the top of the loose fill insulation. Asbestos is most likely found in the finer vermiculite particles or dust, which tends to settle over time. Samples should also be taken from the lower sections in the attic and from the bottom layer of the insulation. Be aware that a negative test may prove to be false, especially if the sample was not taken properly.

Ensure that any vermiculite sample is sent out for analysis to a laboratory that is qualified to analyze asbestos.

Removal of Vermiculite Insulation

Any removal of vermiculite insulation must follow the procedures for asbestos abatement as outlined in the document, "*Guidelines for Working with Asbestos, March 2000 – Type 2 remediation*". Refer to the Manitoba Labour & Immigration, Workplace Safety & Health Division, website: www.gov.mb.ca/labour/safety/guidelines. Ensure that any contractor hired to remediate the asbestos contaminated vermiculite follows the procedures outlined in this Guideline.

More Information:

<http://www.osha.gov/SLTC/asbestos/index.html>

http://www.hc-sc.gc.ca/iyh-vsv/prod/insulation-isolant_e.html

<http://www.epa.gov/asbestos/pubs/insulation.html>

<http://www.epa.gov/asbestos/pubs/verm.html>

<http://www.cdc.gov/niosh/docs/2003-141>

<http://www.gov.mb.ca/health/publichealth/cmoh/vermiculite.html>

"Cette information existe également en français au www.gov.mb.ca/labour/safety/index.fr.html"