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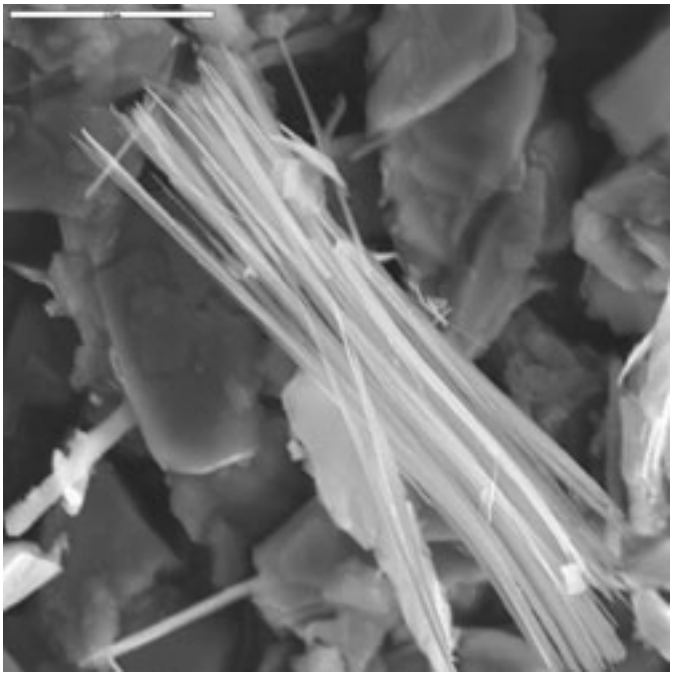
Inspecting Asbestos Cement-Based Siding

This article deals with the common details of asbestos cement-based siding that may be observed during an inspection of the exterior. At the end of this section, you shall be able to:

- Identify and describe asbestos cement-based siding; and
- list the common concerns related to the siding material.



Tremolite Asbestos (U.S. Geological Survey)

Asbestos and cement were first combined in the United States in the early 1900s to form an innovative new building material. Asbestos-cement is a composite material that consists of cement reinforced with asbestos fibers. Asbestos-cement siding shingles can imitate the appearance of wood siding shingles in shape and appearance.

Asbestos fibers are a health hazard when inhaled. Asbestosis is a form of lung cancer that comes from inhaling asbestos fibers. Because of the health risk, strict environmental regulations on working with asbestos were established. Health risks were shown to be greatest during mining and production processes, but minimal during the installation and use of asbestos-cement products.

According to the U.S. EPA, a material containing asbestos is deemed potentially hazardous only in a friable state. Friable state is one in which the material can be crumbled, pulverized, or reduced to a powder by hand pressure. Asbestos-cement is not considered friable, and therefore not hazardous, because the cement binds the asbestos fibers and prevents their release into the air under normal use conditions. However, asbestos-cement products are classified as friable when deterioration disturbs the asbestos. Asbestos-cement products are classified as friable when mechanical means are used for chipping, grinding, sawing, or sanding, therefore allowing particles to become airborne.

If the asbestos-cement siding material is not disturbed, no hazard exists and no precautions are required. It is highly recommended that periodic inspections should be conducted. Be sure to advise your clients about periodic inspections.

Maintain and Manage

Maintenance of asbestos-cement siding material can be performed, which includes performing visual inspections to evaluate its condition, keeping the siding clean, and making minor repairs as necessary. It is important to maintain the environment around the house and to protect the asbestos-cement siding materials. Asbestos-cement is a brittle material. It has little resistance to impact. The siding is susceptible to cracking and chipping. To protect the asbestos-cement siding material, one could plant small shrubs or flowerbeds between the bottom of the wall and the grass lawn. This landscaping feature will serve to protect the siding from lawnmower damage. A piece of trim detail could be added to the bottom of the asbestos-cement siding to reduce vulnerability to cracking and chipping. Trimming the branches from nearby trees and bushes will protect the siding from damage.

Repair

When repair to asbestos-cement siding is needed, the least amount of siding should be discarded and the most possible amount of original material should be retained.

Cracking

If you see hairline cracks in the asbestos-cement siding, clear epoxy could be used in the cracks for repair. Epoxy can be susceptible to UV radiation from the sun and may need periodic maintenance. A grout of cement and water could be used to repair slightly larger cracks. Cracks greater than an eighth of an inch, a thick grout with sand added to the mix could be used for repair.

Fasteners

If the fasteners for the asbestos-cement product have become deteriorated or have broken from corrosion, they should be replaced with a more durable metal. Stainless steel is generally

recommended because of its superior corrosion resistance. Fasteners such as nails should be long enough to hold the materials securely.

Discoloration

Discoloration can come from a surface contamination. Stains can come from a leaching of other material such as corrosion run-off. A change in color can come directly from the environment such as UV radiation from the sun. Discoloration could be normal, but may indicate a chemical reaction decreasing the durability of the material.

Cleaning involves the use of solutions of varying strengths while using the gentlest physical means possible without causing adverse conditions to the material. Mechanical methods for cleaning can promote asbestos fibers to become airborne, therefore should only be used following strict asbestos regulations.

If a discoloration or stain cannot be removed, the asbestos-cement siding could be painted. But painting adds a maintenance factor.

Efflorescence

Efflorescence appears on many cement products that are exposed to weathering. This form of crystalline growth indicates that water is passing through the material, which can promote deterioration of the asbestos-cement. Efflorescence is usually is seen at the beginning of the material's life.

Biological Growth

Biological growth on the exterior of asbestos-cement can be a problem in sheltered environments or on northern exposures. Shade trees located close to a building can shield sunlight and result in prolonged dampness of the asbestos-cement building product and promote biological formations, such as moss and algae. These growths can stimulate surface deterioration and staining.

Replacement

Asbestos-cement siding material commonly deteriorates by cracking and chipping. Repairs are not usually performed on cracked or chipped pieces. Replacement is usually recommended. The replacement piece would be of a non-asbestos fiber cement type.

Replacing several pieces of asbestos-cement siding is easy to do, because asbestos-cement siding was manufactured in standard sizes, shapes, colors, and textures. There are siding materials that have been manufactured to replicate asbestos-cement siding pieces. They are non-asbestos reinforced cement, fiberboard with asphalt, fiberglass, metal, and vinyl.

Inspection Tips for Asbestos-Cement Siding

Where siding is damaged, moisture can enter the building. Look for cracked or mechanically damaged pieces of siding. Mechanical damage can be caused by balls, stones, ladders, or children. Look especially along the bottom edge and corners of the siding.