



# Nonfriable Roofing

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Spokane Regional Clean Air Agency (SRCAA) defines nonfriable asbestos-containing roofing as follows:

*Nonfriable Asbestos-Containing Roofing means an asbestos-containing roofing material where all of the following apply:*

- 1. The roofing is a nonfriable asbestos-containing material;*
- 2. The roofing is in good condition and is not peeling, cracking, or crumbling;*
- 3. The roofing binder is petroleum-based and asbestos fibers are suspended in that base with individual fibers still encapsulated; and*
- 4. The roofing binder exhibits enough plasticity to prevent the release of asbestos fibers in the process of removing and disposing of it.*

If the roofing material is nonfriable pursuant to an asbestos survey performed by a certified AHERA Building Inspector AND it is likely to remain nonfriable during renovation, provisions in SRCAA Regulation I, Article IX, Section 9.07 may be followed. However, if nonfriable roofing will likely be rendered friable during removal, it should be handled as friable asbestos-containing material (ACM).

Removal methods including sanding, grinding, abrading, or sawing will render the material friable. SRCAA defines friable ACM as follows:

*Friable Asbestos-Containing Material means asbestos-containing material that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure or by the forces expected to act upon the material in the course of demolition, renovation, or disposal. Each of these descriptions is separate and distinct, meaning the term includes asbestos-containing material that, when dry, can be:*

- 1. Crumbled by hand pressure or by the forces expected to act upon the material in the course of renovation, demolition, or disposal;*
- 2. Pulverized by hand pressure or by the forces expected to act upon the material in the course of renovation, demolition, or disposal; or*
- 3. Reduced to powder by hand pressure or by the forces expected to act upon the material in the course of renovation, demolition, or disposal).*

*Such materials include, but are not limited to, thermal system insulation, surfacing material, Nicolet roofing paper, and cement asbestos products.*

While manual removal methods are not typically expected to render roofing material friable, it is possible. For example, manual removal methods may abrade the asbestos-containing roofing material, particularly if it is being removed layer-by-layer versus being removed in a single, multi-layer system. Removal methods which abrade the material are not permitted under Section 9.07.

Depending on the quantity of friable ACM removal, an asbestos Notice of Intent (NOI) may be required. For friable roofing, applicable provisions in Article IX (e.g. work practices in Section 9.06) must be followed even in cases where an asbestos NOI is not required.

In summary, there is a difference between merely breaking nonfriable roofing and crumbling it. The extent of breakage which will render the ACM friable depends to some degree on the condition of the material prior to, and during, abatement and disposal. It is difficult to make a general statement on the level of breakage which causes it to be regulated as friable ACM. Therefore, a case-by-case determination must be made considering the condition of the material AND the forces which have or will act upon it in the course of removal and disposal.

Asbestos surveys performed by experienced and certified AHERA Building Inspectors must include an adequate assessment of whether or not a roofing material is friable or nonfriable. However, the AHERA Building Inspectors do not know how the abatement will be performed (i.e. cannot predict the forces which will act upon the material in the course of removal and disposal). For example, methods may be used that will render the material friable. In addition, the state of friability may change from when the asbestos survey was performed. For example, roofing found to be nonfriable during an asbestos survey performed in warmer weather may become brittle and more easily rendered friable if abatement is performed in colder weather. These are just a couple of examples of situations contractors should consider.

## Nonfriable Roofing Cuts and Notification Categories

If nonfriable roofing materials are to be removed with methods that render it friable (e.g. wet saw methods approved by the Washington State Department of Labor & Industries), then the project may be subject to SRCAA NOI requirements. Cutting nonfriable asbestos-containing roofing for removal renders it friable. Be sure to properly calculate the square footage of roofing cuts for purposes of determining whether or not an asbestos NOI is required.

EPA guidance states that a 5,580 square foot roof being removed by cutting with a wet saw would create 160 square feet of friable ACM and would be required to submit a NOI under the federal NESHAP. This means a 35 square foot roofing cut equals about 1 square foot of disturbed asbestos. SRCAA generally utilizes the 35:1 ratio for such projects.

Therefore, because SRCAA's notification thresholds are lower than the federal NESHAP, a roof that is 1,674 square foot or larger that is removed with a wet saw would disturb 48 square feet of roofing and is subject to SRCAA's notification requirements.