

UREA FORMALDEHYDE FOAM INSULATION (UFFI)

Urea Formaldehyde Foam Insulation, more commonly known as UFFI, is a highly expandable *foam-in-place* that became popular as a residential retrofit insulation in the mid-70s. As a suspected health hazard, UFFI was banned in Canada in 1980 and by 1982 in the U.S. (the ban was later lifted in 1983 but it was hardly used after that). Studies over the years have shown that UFFI alone was not a health concern. In fact there may be other air pollutants such as dust mites, other gases, and molds that may have contributed more toward health problems. Formaldehyde gases also emanated from other construction materials and furniture such as plywood, particle board, plastic laminates, carpets, drapes cosmetics, cleaners, paper products and tobacco smoke.

It is impossible to determine if a house contains UFFI from a visual inspection. If UFFI is suspected in a dwelling, more extensive testing should be undertaken by an environmental specialist. If the gases are below the prescribed levels of **0.1 ppm** (parts per million), no further remedial action would be necessary. *Levels decline rapidly to below this level after the first year. If the foam was installed years ago, any vapors from the insulation would be negligible.* Typical indoor air quality contains .03 ppm formaldehyde gas.

UFFI look and feels like dried up shaving cream – it has a crumbly structure and a powdery residue. A positive identification can only be through laboratory testing. It should not be confused with “**foam-in-a-can**” that emits no toxic gases; nor with a new product known as **lcynene**, a water-based product that has a softer texture than UFFI. It has been used in new construction since the early 1990s.

ASBESTOS

Asbestos is a rock fiber once used in many building material products and insulation. In residential dwellings, it can be found in the following:

- ROOFING AND SIDING SHINGLES MADE WITH ASBESTOS CEMENT
- VINYL FLOOR TILES AND ADHESIVES; WALL AND CEILING SOUNDPROOFING (TILES)
- SPRAYED COATING ON CEILING AND WALL (STIPPLE/SPACKLE; BANNED IN 1977)
- INSULATION IN ATTICS AND WALLS (HOMES BUILT BETWEEN 1930 TO 1950)
- INSULATION BLANKETS ON FURNACE DUCTS, HOT WATER OR STEAM PIPES AND BOILERS
- DOOR GASKETS ON A FURNACE AND WOOD STOVE

The amount of asbestos in these products varies from 1 to 75%. Since the late 1970s, the fiber has been eliminated from most construction materials. Proper identification can only be done by laboratory analysis. Most of the time the insulation around pipes looks like white plaster.

Asbestos-containing material in the home does not necessarily pose a health risk. It becomes hazardous only when the material is “**friable**” (the material can be crumbled, pulverized or reduce to powder by hand pressure – dispersing asbestos fibers into the air) and is inhaled. If there is no sign of deterioration there is no health risk. Doing nothing and maintaining the product in good shape is the best approach. In most cases, asbestos fibers are released into the air when demolition or renovation work is undertaken.

The testing and repair of asbestos is best left to a professional. *Identification of asbestos is beyond the scope of a visual home inspection.* The decision whether to remove, enclose or encapsulate deteriorating or damaged material, should be made by a certified trained professional. Most repairs usually involve encapsulation – sealing or covering the asbestos so that fibers do not become airborne. Removal of asbestos products can be an expensive proposition, not only in the physical removal of the product but also in the disposal of asbestos materials.

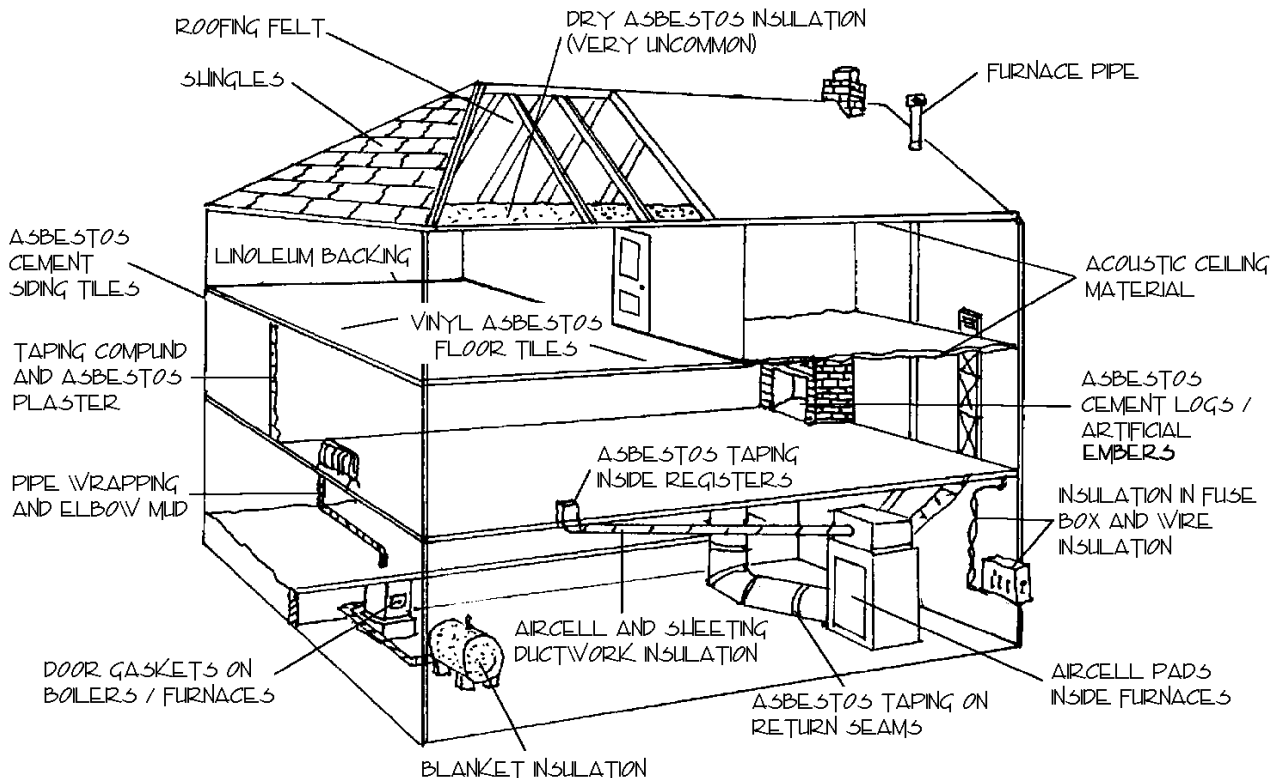
For more information, contact your local health department, regional EPA office or Consumer Products Safety Commission (CPSC), in the U.S. In Canada contact National Research Council of Canada, Occupational Health and Safety or Canadian Mortgage and Housing Corporation (CMHC).

Insulation Ratings

INSULATION TYPE	R-NUMBER					
	11	13	19	22	30	38
Batts/Blankets						
Mineral (Rock) Wool	3	4	5½	6	8½	11
Fiberglass	3½	4	6	7	9½	12
Loose-fill						
Cellulose	3	3½	5½	6	8½	11
Mineral (Rock) Wool	4	4½	6½	8	10½	13
Fiberglass	5	5½	8½	10	13½	17
Vermiculite	5	6	9	10	14	18
Rigid Board						
Fiberglass	3	3½	5	5½	7½	9½
Extruded Polystyrene	3	3½	5	5½	7½	9½
Expanded Polystyrene	3	3½	5½	6	8½	
Foam-in-place						
Urethane	2	2	3	3½	5	6
Icynene	3	4	5	6½	8½	10½

(thickness in inches)

R-numbers are additive; an insulation rated at R-11 added to one



Potential asbestos location in a house