



Fiberglass

This factsheet is primarily for homeowners, as well as landlords and tenants, who are exposed to fiberglass during do-it-yourself home renovation and repair projects.

WHAT IS FIBERGLASS AND WHERE IS IT FOUND?

Fiberglass is a type of man-made vitreous fiber that may also be called fibrous glass or glass wool. A fiber is a particle that is at least three times as long as it is wide. The primary fiber-forming substance in fiberglass is glass. Fiberglass is primarily used for home and building insulation in the form of loose fill, blankets, rolls, or rigid boards for sound insulation. It is also used to insulate equipment and appliances. Fiberglass has been observed in some mattress covers.

HOW CAN I BE EXPOSED TO FIBERGLASS?

Fiber exposure can happen when you handle, install, or remove fiberglass products during home repair activities. It can also occur through skin or eye contact, inhalation, or swallowing inhaled fibers. Once fiberglass is installed, exposure to fibers is low unless it is damaged or disturbed.

Man-made vitreous fiber levels in indoor environments have been studied. The background concentration of fibers measured in homes is much lower than the recommended workplace exposure limits.^a Higher levels have been measured during installation and removal activities, especially for blowing loose-fill insulation into attics or walls.^{b c}

HOW CAN FIBERGLASS AFFECT MY HEALTH?

Exposure to fiberglass can cause irritation in the eyes, nose, or throat. It may also cause itching and irritation when the fibers get stuck in the skin. These effects are temporary and go away after exposure ends.

You aren't likely to develop serious health problems from exposures that occur during short-term home renovation and repair activities, primarily if you use work practices to minimize dust, provide good ventilation, and wear appropriate clothing and protective equipment.

There is inadequate evidence that glass wool fibers used for home insulation cause cancer in humans.^{d e} Certain glass wool fibers, known as special purpose fibers, are possibly carcinogenic to humans^f, but these fibers are not used for home insulation.

HOW CAN I REDUCE MY EXPOSURE TO FIBERGLASS?

You can take steps to reduce your exposure to fibers when working with materials that contain fiberglass:

- Wear disposable lightweight coveralls or loose-fitting, long-sleeved clothing and cut-resistant gloves. This will reduce skin contact and irritation.
- Wear an N95 filtering facepiece respirator to minimize fiber inhalation. A reusable full-face respirator with N95 filters will also work.

- Wear goggles or safety glasses with side shields to protect the eyes.
- Open a window or a door to increase ventilation and reduce dust levels. Place a fan securely in a window to exhaust air to the outdoors.
- Use a light water mist on fiberglass products to minimize dust during removal and disposal.
- Use a HEPA-filtered shop vacuum to clean up. Surfaces can also be wiped clean with a wet microfiber cloth.

The following measures can be taken after exposure to fiberglass. If you get fiberglass in your eyes, flush them with water. Any exposed skin area should be washed with soap and warm water to remove fibers. Clothing worn while working with fiberglass should be removed and washed separately from other clothing. The washing machine should be rinsed thoroughly after the exposed clothing has been washed.

The North American Insulation Manufacturers Association Health and Safety Resource Library provides additional information about recommended work practices for general and specific applications. This includes the pamphlet “Working Smart with Fiber Glass, Rock Wool, and Slag Wool Products.”

WHERE CAN I GET MORE INFORMATION?

Illinois Department of Public Health
Division of Environmental Health
525 W. Jefferson St.
Springfield, IL 62761

217-782-5830

TTY (hearing impaired use only) 800-547-0466

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This fact sheet was made possible by a cooperative agreement [program # TS-23-0001] from the Agency for Toxic Substances and Disease Registry (ATSDR). Its contents are solely the responsibility of the Illinois Department of Public Health Environmental Health Toxicology Section and do not necessarily represent the official views of the ATSDR, or the U.S. Department of Health and Human Services.

^a Allen LH, Suder Egnot N, Allen H, Chan K, Marsh G. Exposure to MMVF in residential and commercial buildings: A literature review and quantitative synthesis. *Toxicology and Industrial Health*. 2023;39(9):528-536. doi:[10.1177/07482337231187092](https://doi.org/10.1177/07482337231187092)

^b IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, No. 81. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Lyon (FR): [International Agency for Research on Cancer](https://www.iarc.fr/); 2002: 115-117.

^c NAIMA Fact Sheet #78 Exposure Data for Fiberglass, Rock Wool, and Slag Wool: <https://insulationinstitute.org/wp-content/uploads/2016/02/Facts-78.pdf>

^d IARC Monograph, No. 81. 2002: 338-339

^e NTP (National Toxicology Program). 2021. Report on Carcinogens, Fifteenth Edition. Research Triangle Park, NC: U.S. Department of Health and Human Services, Public Health Service. <https://ntp.niehs.nih.gov/go/roc15> DOI: <https://doi.org/10.22427/NTP-OTHER-1003>

^f NTP. Glass Wool Fibers Expert Panel Report, Part B – Recommendation for Listing Status for Glass Wool Fibers and Scientific Justification for the Recommendation. 2009: 1-2. Available from: https://ntp.niehs.nih.gov/sites/default/files/ntp/roc/twelfth/2009/june/gwf_partb.pdf.