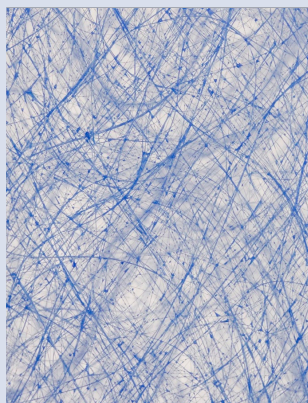




Certain Glass Wool Fibers (Inhalable)

Key Points



Certain Glass Wool Fibers (Inhalable)

- Reasonably anticipated to be human carcinogens
- Glass wool fibers are small, finely spun synthetic fibers resembling wool
- Not all glass wool fibers cause cancer – only certain ones that enter the respiratory tract (inhalable), and remain in the lungs for long periods of time (biopersistent), are likely to cause cancer in humans

Report on Carcinogens Status

Reasonably anticipated to be human carcinogens

What are glass wool fibers?

Glass wool fibers are synthetic or man-made, very small finely spun fibers of glass that form a mass resembling wool. There is considerable variation in the properties of individual fibers within this class, depending on the manufacturing process and end use. They are commonly used for insulation or filtration.

How are glass wool fibers used?

There are generally two categories of glass wool fibers that consumers might use: low-cost general-purpose fibers and premium special-purpose fibers. Most home and building insulation projects use general-purpose glass wool. Special-purpose glass fibers are used for applications, such as separating the negative and positive plates in a battery, and in high-efficiency air filters and aircraft, spacecraft, and acoustical insulation. In general, insulation fibers are less durable and less biopersistent than special-purpose fibers, and may be less likely to cause cancer than the more durable, more persistent special-purpose fibers.

How are people exposed to glass wool fibers?

People are primarily exposed to glass wool fibers by inhaling them in workplaces where products containing glass wool fibers are produced. Individuals working on home improvement projects installing or removing insulation made of glass wool products may also be potentially exposed. However, in general, due to their low durability, most home insulation fibers are less likely to cause cancer in humans.

What evidence is there that certain inhalable glass wool fibers cause cancer?

Human Studies

The available human studies are unable to determine whether exposure to glass wool fibers causes cancer.

Animal Studies

There is sufficient evidence in laboratory animal studies showing that glass wool fibers, as a class, cause tumors in the animal's lungs and at other tissue sites. However, the ability of glass wool fibers to cause cancer in animals varied depending on the types of fibers tested. Studies evaluating the relationship between fiber properties and cancer have shown that only certain fibers, specifically those biopersistent in the lung, are likely to cause cancer. Glass wool products should be tested on a case-by-case basis to determine if they are biopersistent.

Mechanistic Studies

Mechanistic studies have shown that some glass wool fibers have the potential to cause damage to DNA.

How can I prevent exposure to this substance?

Follow safe work practices and wear appropriate protective equipment, such as long-sleeved work clothing or disposable coveralls, a respirator, safety glasses, and gloves. For more information about safe work practices and protective equipment, follow the Occupational Safety and Health Administration link below.

Where do I go for more information?

National Toxicology Program
<http://ntp.niehs.nih.gov/go/roc12candidates>

Occupational Safety and Health Administration
<http://www.osha.gov/SLTC/syntheticmineralfibers/index.html>



The Report on Carcinogens, Twelfth Edition, is prepared by the National Toxicology Program, an interagency group coordinated by the U.S. Department of Health and Human Services. The report identifies agents, substances, mixtures, or exposures in two categories: *known to be a human carcinogen* and *reasonably anticipated to be a human carcinogen*. **The full Report on Carcinogens is available at <http://ntp.niehs.nih.gov/go/roc12>.**

