

Technical Bulletin – Understanding Mold

What is Mold?

Mold is the common term used to describe a growth caused by fungi, especially in the presence of dampness. Mold is Mother Nature's way of recycling organic matter. Every cubic foot of air has thousands of mold spores floating within it. Every surface - natural or manmade, inside or out - has thousands more spores that have settled upon it. A fungus (pl. fungi) may be any of a large number of simple microorganisms that do not need energy from light for growth. The fungi bear microscopic spores that are produced in enormous quantities, are always present in the air, and spread via air currents. They are often water repellent and are resistant to desiccation (drying out).

"Mold" is often used interchangeably with the word mildew. These are the generic terms that describe a variety of microorganisms, including fungi, algae, rusts, yeasts, and bacteria.

Under a microscope, mold has an octopus-like structure. Its legs attach to a surface in a web-like manner. Once a mold has successfully colonized, it turns a dark color and releases thousands of new spores.

Is Mold Toxic?

We are constantly surrounded by molds, mildews and fungus in our physical world. There is no escaping it. Most molds are considered to be non-toxic with typical reactions to over exposure being common allergenic and asthmatic type reactions. There is however one genus of mold/fungi that has the potential for toxicity called *Stachybotrys* or Black Mold. This particular Genus of mold is considered to contain natural toxins which upon prolonged exposure have the potential to cause chronic health issues though the research remains inconclusive. Research on this genus is ongoing as this genus of mold has come to public attention with its appearance in homes, workplaces and other closed environments which have experienced water infiltration events.

Where Does Mold Grow?

Mold can grow on anything. Brick, Plastic, Composites, Wood even Glass. All that's required is the buildup of organic matter and the right conditions. Mold is a natural part of our environment and its removal a normal part of any building product maintenance.

What Makes Mold Grow?

Molds need three things to grow: food, water, and temperate weather.

When the spores are in favorable environment, they will germinate. What constitutes a favorable environment is different for each species of spore. Since the spores settle out of the air, they will be more prevalent on horizontal surfaces. The colonies do not migrate, like a rot, but rather establish colonies and release more spores. Regularly cleaning any surface is generally recommended because the colonies are typically invisible; they only change color after they have released spores and died. Cleaning a surface removes the food source (pollen, dirt) and removes any dormant spores as well. After landing on a host material, a spore must obtain sufficient moisture to find enough food. Without moisture, the spores will lie dormant until favorable conditions occur.

There are many common food sources, such as dust, pollen, and other pollutants. Water is essential for the growth of mold. Greater than 60% humidity, steady dampness, and temperatures between 40 and 100 degrees F, are the factors most conducive to growth. Spores will stay dormant if the conditions are too dry or too cold, or if there are insufficient food sources.

How To Remove Mold...

It is important that any cleaning procedure fully remove the web-like "legs" of the colonies, penetrate the water-repellant outer surface, and remove the food source. The ideal cleaner specifically designed for the affected surface material. A combinations of bleach, water, and laundry detergent are also effective. There are also deck cleaners with fungicides available. Whatever cleaner you choose make sure to follow manufacturer's instructions carefully. In all cases, use the correct protective equipment such as safety glasses, dust-mask and gloves. In severe cases you may have to remove and replace the effected materials.

How To Reduce Mold Growth...

Reducing the growth of mold is all about reducing the three factors that it needs to live. Keep the surface as dry as possible, and remove the food source by regularly cleaning surfaces.

For more information about Iron Woods installation and maintenance "Best Practices" please visit our Website and PDF Library at...

www.ironwoods.com