

Title: Can Steel Buildings Get Mold?

Content Type: Blog Post

While Texas looks on a bit enviously, much of the United States is seeing a little more moisture than it wants to. Flooding, rain, high humidity, and stormy weather can take their toll on any structure. Mold dearly loves moisture and can cause no end of trouble if it isn't prevented.

Now, steel itself won't mold. If all you have is a steel frame, some metal panels, and roofing with nothing else, the only thing to worry about is rust. But your building probably has other materials in the walls and roof and those are prime places for mold to grow unnoticed.

How Did THAT Get There?

One day you look up and there's a nasty brown stain on the ceiling. Or the place starts to smell like a locker room. This is usually the first time you will realize you have mold. Unfortunately, it's probably been growing for a little while and will take more work to clean up than you can imagine.

What's really bad is that mold spores are everywhere; there's no way to prevent them from entering the building. Once inside they get scattered throughout the structure and sucked up into the air ducts to be spread further still. And mold thrives at temperatures between 40 to 100°. Unless you want to turn the place into a meat locker or a sauna, the temperatures you like, mold likes.

Introduce moisture and the conditions are perfect for mold to propagate to create the yucky stains and smelly atmosphere. As you have probably heard on the news, mold can cause respiratory ailments for the inhabitants; more bad news.

One more thing...mold destroys the stuff it grows on. It actually feeds on organic matter which means wood components, cotton, or other plant or animal material within the structure is fair game. Steel is not organic so mold doesn't snack on it, but mold can sure make the place ugly after awhile.

Mold Removal

Once something has mold in it or on it you may as well pitch it and replace it. Metal and certain plastic surfaces can be cleaned and treated by a professional but any insulation, sheet-rock, wall board, wood, carpeting, or other material will just have to be torn out and put in the dumpster.

Before replacing everything, identify the source of moisture and fix it. You don't want mold to get started all over again.

Mold Prevention

Prevent moisture and you prevent mold.

As you erect a metal building make sure all holes and edges are completely sealed. Select at least a slightly peaked roof if possible to allow water to run off; otherwise make sure there is no place for standing water. A standing seam roof makes an excellent water-shed and if the panels and seams are properly installed will keep water from under the roof.

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Install gutters and downspouts to gather and direct water away from the foundation and to keep it from washing down the wall panels and getting in through poorly sealed windows and doors. If you are going green you can even collect the rain water for future irrigation.

Condensation and moisture can be mitigated with proper ventilation. Any time there is a temperature differential between a component and the air, condensation can occur. This includes windows and doors, HVAC ductwork, even the metal wall and roof panels.

Insulation can keep condensation away from the interior roof and the ceiling by controlling the temperature differential at the metal panel. Wrapping metal pipes and ductwork in insulation can keep them from sweating.

Keep air moving to ventilate the interior carrying in fresh air and providing drying to the interior of the building. Barns are good with roof or wall openings. If necessary add fans to circulate air. If the prevailing environment is humid, consider using a dehumidifier or the AC compressor to keep the air drier.

Final Note

Steel cannot get mold but a steel building can. Insulation, carpeting, wood, and wall paneling are all places for mold to take hold. To keep it out, thoroughly plan ventilation, seal any hole water can enter, and prevent condensation. With these steps your building will continue be a good place to be.