



Questions and Answers from the Mold and Moisture Webinar

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Building Materials

Q: I live in the Southwest where most of the structures are built with stucco. In regards to mold and moisture issues, what should we be looking for in comparison to brick buildings?

A: The principles of moisture drive are relatively the same in a brick or stucco building. The key to mold control is placement of the vapor barrier (exact location is dependent on geographic location and climate). To minimize water intrusion through cracks and joints of the plaster, ensure that proper damp-proofing is installed directly behind the plaster surface.

Q: What is the best way to search behind brick for mold?

A: We drop a small “pencil” camera down behind the brick. It is important to remove a few pieces of brick high in the wall and ensure that there is enough space between the brick and back-up to allow camera access.

Q: Is fiberglass mold resistant?

A: Fiberglass does not, by itself, promote mold growth; however, the paper facer and dirt and debris that collects in and on fiberglass does promote mold growth.

Q: Do issues arise with moisture intrusion from below the slab/vapor barriers?

A: Yes. Depending on the type of flooring in place and the moisture content of the soil, moisture seeping up through the slab or through below-grade walls can cause mold issues.

Q: What is CMU?

A: CMU stands for “concrete masonry unit” (cinderblock).

Q: Mortar build up behind walls seems inevitable at our school; what is your recommendation to address this issue?

A: We have had great success with the use of mortar nets, which are approximately 12 inches in height. In addition, we have stringent quality control procedures to ensure our contractor is cleaning the back side of the brick.

Carpet Cleaning

Q: Those who don't use dry extraction methods put a lot of moisture into their building. Do you have any experience with moldy carpet or humidity-removal issues due to the wet cleaning of carpet?

A: The flooring that we typically refer to as “carpet” is a non flow-through, bonded, vinyl-backed and fiber surface product. This flooring is called vinyl cushion tufted textile (or VCTT). The six foot seams are welded so water will stay on top of the floor. Cleaning and drying of this type of flooring is easier and safer than cleaning and drying foam-backed flooring.

We also have truck-mounted steam cleaning equipment as well as smaller carpet cleaners. There are several considerations with the use of both of these pieces of equipment: clean flooring according to manufacturer recommendations, keep equipment in good operating condition, and train every employee responsible for the use of the equipment and care of the floor.

We clean by zones in conjunction with the air conditioning zones and leave the air conditioning operating overnight. We also use carpet fans in addition to the heating, ventilation and air conditioning (HVAC) systems. If warranted, we place portable dehumidifiers in strategic areas. If there is a breakdown in any one of these processes and the floor stays wet for 12 hours to 24 hours, the flooring may need to be replaced.

Heating, Ventilation and Air Conditioning (HVAC) Units

Q: How do you deal with the fresh air requirement in humid climates without overloading your HVAC system?

A: The most common approach in humid climates is a dedicated outside air pretreatment unit with separate time-of-day scheduling capabilities that allow for the conditioning of outside air independent from the unit that supplies air to the occupied space.

Q: When running the HVAC unit on auto, do you also monitor carbon dioxide (CO₂) levels?

A: Yes. CO₂ is typically only monitored when there is a demand-controlled ventilation sequence that automatically modulates the volume of fresh air being introduced into the building based on concentration of CO₂.

Q: Does the auto setting on the thermostat create a problem with limiting outdoor air and elevated CO₂ levels?

A: For systems that cycle off and on based on room temperature alone, there is a possibility that the ventilation will be compromised. Appropriate measures are needed to make sure adequate outside air is introduced during occupied hours across all outdoor temperature ranges.

Q: Do you think that cleaning the ventilation system (i.e., ducts) should be a higher priority than simply cleaning the registers, return grilles and outside air intakes?

A: If the air devices look clean but the ducts are dirty, then the air system is not truly clean; all components should be cleaned as they are of equal importance.

Temperature

Q: Should air conditioning units be running during the summer — when there are high humidity levels and high temperatures — when school is not in session?

A: In the summer, buildings left completely uncontrolled can have many problems such as sagging ceiling tiles and microbial growth on books, carpets and other porous materials. Temperature setbacks are recommended for energy conservation, but relative humidity should be monitored and controlled to not exceed 59 percent.

Q: Does the temperature of a room in any way affect the humidity of the room?

A: There is a non-linear correlation between temperature and humidity. In general, as the temperature falls, the relative humidity rises. As the temperature rises, the relative humidity falls for a given fixed indoor air volume. A room can feel uncomfortable due to elevated relative humidity at any temperature, so just making a room colder can lead to that clammy feeling unless proper dehumidification is achieved. Temperatures in schools should be maintained between 70 and 74 degrees Fahrenheit and between 30 percent minimum and 59 percent maximum relative humidity during all occupied hours.