



GUIDE 7

GUIDE 7: MOLD CLEAN UP WITH BLEACH

Before You Clean

Fungi (or mold) need a source of moisture, a source of organic matter, and proper temperature. After a flood event, the flood waters will have soaked carpeting, furniture, and building materials (drywall, wood studs, flooring, etc.), creating a suitable environment for mold growth.

These materials must be removed or completely dried out to prevent mold from growing. Areas inside your home that have poor air movement and retain moisture are likely areas for future mold growth. Remove any sources of moisture and repair damages that may contribute to moisture.

Testing for Mold

Testing for mold is generally not necessary. If you can **see and smell it**, you have a mold problem. In flood situations, mold growth may begin on the backside of wet drywall, between building substrates, or under wet carpeting. It may not be visible, but you may be able to notice a musty or moldy smell.

Elimination of wet, flood-damaged building materials, furnishings, and personal items will be necessary to prevent mold problems. If ongoing mold problems occur, it is recommended that you have a thorough inspection to determine the cause of the mold growth. DHS recommends that you hire a consultant specializing in building assessments to evaluate your entire house.

Cleaning Up Mold

- Take things that were wet for two or more days outside. Things that stayed wet for two days have mold growing on them, even if you can't see it.
- Take out stuff made of cloth, unless you can wash them in hot water. Also take out stuff that can't be cleaned easily (like leather, paper, wood, and carpet).
- Use bleach to clean mold off hard things (like floors, stoves, sinks, certain toys, countertops, flatware, plates, and tools).

- Never mix bleach with ammonia or other cleaners.
- Wear rubber boots, rubber gloves, goggles, and an N-95 mask.
- Open windows and doors to get fresh air in while you use bleach.
- Mix no more than one cup of bleach in one gallon of water.
- Wash the item with the bleach and water.
- If the surface of the item is rough, scrub the surface with a stiff brush.
- Rinse the item with clean water.
- Dry the item or leave it out to dry.

Occasionally, mold can be found in the bathroom, on a windowsill, shower curtain, or wall. This mold can be wiped off the surface with a damp cloth and cleaning agent (e.g., window or bathroom cleaner).

Preventing mold growth requires controlling the moisture source. This may be as simple as using a dehumidifier or fixing a simple leak. For larger mold problems (about 10 square feet), follow these instructions:

1. Preparation Phase

- Plastic sheets, at least 4 mm thick, to cover door openings, floors, and vents
- A breathing respirator that covers mouth and nose with HEPA cartridges
- Three spray bottles/plant misters
- Paper towels or disposable rags
- Heavy duty plastic garbage bags
- General household cleaner (without ammonia)
- Regular household bleach (between 1% to 5% chlorine). Bleach is typically not necessary to clean up mold, unless a sewage release occurred. In this case, both mold and bacteria can be reduced by using a bleach solution as a final disinfecting rinse.
- Latex or rubber gloves and goggles
- A one-cup measuring container
- Three buckets that will hold at least a gallon of water each
- Commercial grade HEPA vacuum. Do not use a home vacuum since it is not designed for this type of work.
- Dehumidifier

2. Mixing Phase

- **Spray bottle #1:** Mix general household cleaner and water in a bucket, then transfer to spray bottle (follow manufacturer's instructions). Remember not to mix bleach with household cleaners; if ammonia is mixed with bleach, a toxic gas can form.
- **Spray bottle #2:** Add 1 cup bleach to every gallon of tap water in a bucket, then transfer to spray bottle. Bleach is necessary when there has been a gray (laundry) or black (sewage) water release. Use gloves and eyewear when handling bleach.
- **Spray Bottle #3:** Clean, warm water for rinsing.

3. Application and Cleaning Phase

- The bleach solution is irritating and harmful to the skin, eyes, and clothing. Avoid direct contact with the bleach by wearing rubber gloves, respirator, and goggles during the entire mixing and cleaning process.
- Prepare the work area.
 - Seal off the room from the rest of the house with the plastic and tape.
 - Keep children and animals out of the work area.
 - Do not eat, drink, use gum/tobacco, or smoke at any time during cleaning.
 - Use a dehumidifier prior to, during, and after the clean-up to keep areas dry and prevent mold from reoccurring.
- Removing the mold.
 - Removing visible mold. Spray with general household cleaner (spray bottle #1). Start from the top and work down, changing towels frequently. Discard towels in a plastic bag. Rinse the same area with clean water on a damp towel or lightly spray with warm rinse water in a spray bottle (spray bottle #3) and wipe with a clean towel. Repeat until all visible mold is gone.
 - Removing mold and water release. Spray with bleach solution (spray bottle #2), wipe affected area of mold and let set for 15 minutes. Rinse the area with a damp towel using clean warm water or by lightly spraying with warm rinse water in a spray bottle (spray bottle #3) and wiping with a clean towel.

4. Cleaning Up the Work Area

- Once the surface is dry to the touch, use the HEPA vacuum to remove allergens. Place the HEPA vacuum bag into a garbage bag and dispose of it as you would normal garbage.
- Flush wastewater down a toilet, utility sink, or floor drain.
- Change out of your cleaning clothes and wash them separate from your family's laundry.
- Wash hands and face.

At this point, you can apply paint or other coating to the surface. You may wish to use a paint or coating that contains a fungicide to prevent future mold growth. Be sure to follow the manufacturer's instructions and recommendations when using any mold-resistant paint or paint additive. Remember, these are also pesticides and may have adverse health effects on some individuals.

Use of Ozone Air Cleaners

Do not use ozone air cleaners to kill mold. Ozone air cleaners generate ozone, a known respiratory irritant. The U.S. Environmental Protection Agency (EPA) does not recommend using ozone-generating air cleaners for treating indoor mold problems. If a contractor recommends the use of an ozone-generating air cleaner to treat mold problems in your home, please file a complaint with the Department of Agriculture, Trade, and Consumer Protection at 1-800-422-7128.

