

MOISTURE, MOLD AND CONSTRUCTION PRACTICES

REPAIRING WATER-DAMAGED BUILDING SYSTEMS

CONDITIONS NECESSARY FOR MOLD GROWTH

What should you do if your wallboard has mold? This document discusses the conditions necessary for mold growth, provides basic repair steps and contains additional information on mold.

Mold consists of microorganisms that can, under the right conditions, find a suitable environment in which to grow and survive on building materials. The best way to address mold is to make sure that building materials do not get wet before installation and are not exposed to moisture inside the finished building.

When building materials get wet, mold may grow. Condensation, pipe leakage, roof and window leakage, and incidental splashing can cause building materials to become wet.

In all situations, immediately identify and address the source of moisture to prevent recurrence of the problem.

REPAIR

Use caution when evaluating and repairing water-damaged building systems. Do not investigate or begin repairs unless you are qualified to do so and understand the potential risks involved. Where mold growth is extensive, a qualified independent construction professional should assess the situation and help develop and implement a plan that addresses each of the following:

- Eliminating the conditions for mold growth.
- Cleaning mold from surface of material(s).
- Removing damaged material that cannot be cleaned.

IN THE CASE OF FLOODS: KEEP IT CLEAN AND DRY

Focus efforts on removing the conditions that cause mold growth. In the cases of leaking roofs, ceilings, walls or plumbing problems, repair the source of the moisture immediately. In a flood situation, follow the American Red Cross and Federal Emergency Management Agency (FEMA) guidelines for the safe return to affected areas. Once you eliminate the conditions for mold growth, begin cleaning, repair or removal.

CLEANING OR REMOVAL: WHICH IS BEST?

This is a very complex question, and proper investigation and research is critical. For instance, flood waters due to natural disasters can contain chemical and biological contaminants from external sources. Natural disasters may also cause other issues, including live electricity, broken gas lines, trapped water behind walls, etc. In these severe situations, it is recommended that you contact your local FEMA office to ensure you are mitigating all potential issues. There are also many state and local agencies that provide disaster assistance.

CLEANING

Clean, Dry, Disinfect: If cleaning the surface of the materials is your decision, proper scrubbing removes surface mold. Once conditions for mold growth have been removed, the following procedure is suggested to remove mold growth and staining.

- Use appropriate protective equipment.
- Mix detergent and potable water in a clean container.
- Use detergent, bleach and potable water for stubborn stains (follow manufacturer's instructions for use of cleaning supplies; never mix bleach and ammonia, or other cleaners if contents are not known); provide adequate ventilation with use of bleach.
- Scrub areas that exhibit growth and staining.

CLEANING CONT.

- Rinse with water—don't soak the gypsum board while cleaning and rinsing.
- Allow gypsum board to dry and inspect for visible growth and staining.
- Repeat as necessary until affected areas are clean.

REMOVAL

A Project-Specific Decision: Proper cleaning addresses the surface condition of the gypsum board. However, when construction materials get wet, mold and moisture can also be present in the material or structure itself (e.g., wall cavity). Eliminating the moisture source takes care of part of the problem. If you doubt the effectiveness of cleaning, replacement of all water-damaged materials may be the solution. The decision to remove and replace affected materials should be made by qualified individuals such as an independent construction professional. USG does not require the removal of USG Sheetrock® Brand Gypsum Panels simply because they once were wet. However, if conditions for mold growth exist and panels have been wet continuously for more than 24 hours or intermittently for many days or weeks, the best assurance against mold growth is elimination of the conditions for growth along with replacement of affected materials.

Contact the FEMA office near you for more information on the repair of water-damaged structures. Many university extension programs and public health departments can also provide guidance on flood and moisture remediation measures.^{1,2,3}

Notes:

1. University of Minnesota Department of Environmental Health and Safety, dehs.umn.edu
2. Iowa State University Extension and Outreach, extension.iastate.edu
3. Cambridge Emergency Management Department, City of Cambridge, Massachusetts, cambridgema.gov/emergencymanagement.aspx

ADDITIONAL SOURCES

- New York City Department of Health, nyc.gov/html/doh/home.html (search for mold resources)
- United States Environmental Protection Agency, epa.gov/iaq (search for mold resources)
- Federal Emergency Management Agency (FEMA), fema.gov
- Texas Emergency Preparedness, emergency.portal.texas.gov
- Florida Division of Emergency Management, floridadisaster.org/index.asp

PRODUCT INFORMATION

See usg.com for the most up-to-date product information.

TRADEMARKS

The trademarks USG, SHEETROCK, IT'S YOUR WORLD, BUILD IT., the USG logo, the design elements and colors, and related marks are trademarks of USG Corporation or its affiliates.

NOTE

Products described here may not be available in all geographic markets. Consult your USG Company sales office or representative for information. The information in this document is subject to change without notice. USG Corporation assumes no responsibility for any errors that may inadvertently appear in this document.

NOTICE

We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

SAFETY FIRST!

Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read Safety Data Sheets and related literature on products before specification and/or installation.

800 USG.4YOU
800 (874-4968)
usg.com

Manufactured by
United States Gypsum Company
550 West Adams Street
Chicago, IL 60661

WB2315-USG-ENG/rev. 9-17
© 2017 USG Corporation and/or
its affiliates. All rights reserved.
Printed in U.S.A.

USG
IT'S YOUR WORLD. BUILD IT.®