A Brief Guide to Mold in the Workplace

U. S. Department of Labor
Occupational Safety and Health Administration
Directorate of Science, Technology and Medicine
Office of Science and Technology Assessment

Safety and Health Information Bulletin

SHIB 03-10-10

This Safety and Health Information Bulletin is not a standard or regulation, and it creates no new legal obligations. The Bulletin is advisory in nature, informational in content, and is intended to assist building managers, custodians, and others who are responsible for building maintenance. Contractors and other professionals (e.g., environmental consultants and health or safety professionals) who respond to mold and moisture situations in buildings, as well as members of the general public, also may want to refer to these guidelines.

The Occupational Safety and Health Act requires employers to comply with hazard-specific safety and health standards as issued and enforced by either the Federal Occupational Safety and Health Administration (OSHA), or an OSHA-approved State Plan. In addition, Section 5(a)(1), the General Duty Clause, requires employers to provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm. Employers can be cited for violating the General Duty Clause if there is such a recognized hazard and they do not take reasonable steps to prevent or abate the hazard. However, failure to implement these guidelines is not, in itself, a violation of the General Duty Clause. Citations can only be based on standards, regulations, and the General Duty Clause.

18 CPWR – This OSHA bulletin is dated yet it remains pertinent. Not much has changed since it’s creation. The contents of this bulletin should not be taken as the definitive word on the subject of what building and construction workers should do when they encounter mold while doing their “normal” work and/or they are told to go ahead and “take care of the problem”. Bold has been added to text for emphasis. ANSI is currently drafting Z690-20XX Guidelines for Mold and Fungi Control and Remediation for Worker Protection in Indoor Environments.
Introduction

Concern about indoor exposure to mold has increased along with public awareness that exposure to mold can cause a variety of health effects and symptoms, including allergic reactions. This safety and health information bulletin provides recommendations for the prevention of mold growth and describes measures designed to protect the health of building occupants and workers involved in mold cleanup and prevention. This bulletin is directed primarily at building managers, custodians, and others responsible for building maintenance, but may also be used as a basic reference for those involved in mold remediation. By reading this safety and health information bulletin, individuals with little or no experience with mold remediation may be able to reasonably judge whether mold contamination can be managed in-house or whether outside assistance is required. The advice of a medical professional should always be sought if there are any emerging health issues. This document will help those responsible for building maintenance in the evaluation of remediation plans. Contractors and other professionals (e.g. industrial hygienists or other environmental health and safety professionals) who respond to mold and moisture situations in buildings, as well as members of the general public, also may find these guidelines helpful. The information in these guidelines is intended only as a summary of basic procedures and is not intended, nor should it be used, as a detailed guide to mold remediation. These guidelines are subject to change as more information regarding mold contamination and remediation becomes available.

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Remediation Plan

Remediation includes both the identification and correction of the conditions that permit mold growth, as well as the steps to safely and effectively remove mold damaged materials.

Before planning the remediation, assess the extent of the mold or moisture problem and the type of damaged materials. If you choose to hire outside assistance to do the cleanup, make sure the contractor has experience with mold remediation. Check references and ask the contractor to follow the recommendations in EPA’s publication, “Mold Remediation in Schools and Commercial Buildings,” or other guidelines developed by professional or

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19 CPWR – You would be well advised to learn more about mold than what is contained in this AWARENESS GUIDE FOR MOLD. The following topics have been deleted from this OSHA bulletin because they already have been covered in more detail in earlier portions of this CPWR GUIDE – “Mold Basics”, “Health Effects”, “Prevention”, “Sampling for Mold”, and “Use of Biocides”.

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governmental organizations.

**The remediation plan should include steps to permanently correct the water or moisture problem.** The plan should cover the use of appropriate personal protective equipment (PPE). It also should include steps to carefully contain and remove moldy building materials in a manner that will prevent further contamination. Remediation plans may vary greatly depending on the size and complexity of the job, and may require revision if circumstances change or new facts are discovered.

If you suspect that the HVAC system is contaminated with mold, or if mold is present near the intake to the system, contact the National Air Duct Cleaners Association (NADCA), or consult EPA’s guide, *Should You Have the Air Ducts in Your Home Cleaned?*” before taking further action. Do not run the HVAC system if you know or suspect that it is contaminated with mold, as it could spread contamination throughout the building. If the water or mold damage was caused by sewage or other contaminated water, consult a professional who has experience cleaning and repairing buildings damaged by contaminated water.

The remediation manager’s highest priority must be to protect the health and safety of the building occupants and remediators. Remediators should avoid exposing themselves and others to mold-laden dusts as they conduct their cleanup activities. Caution should be used to prevent mold and mold spores from being dispersed throughout the air where they can be inhaled by building occupants. In some cases, especially those involving large areas of contamination, the remediation plan may include temporary relocation of some or all of the building occupants.

When deciding if relocating occupants is necessary, consideration should be given to the size and type of mold growth, the type and extent of health effects reported by the occupants, the potential health risks that could be associated with the remediation activity, and the amount of disruption this activity is likely to cause. In addition, before deciding to relocate occupants, one should also evaluate the remediator’s ability to contain/minimize possible aerosolization of mold spores given their expertise and the physical parameters of the workspace. When possible, remediation activities should be scheduled during off hours when building occupants are less likely to be affected.

Remediators, particularly those with health related concerns, may wish to check with their physicians or other health-care professionals before working on mold remediation or investigating potentially moldy areas. If any individual has health concerns, doubts, or questions before beginning a remediation/cleanup project, he or she should consult a health professional.
Mold Remediation/Cleanup Methods

The purpose of mold remediation is to correct the moisture problem and to remove moldy and contaminated materials to prevent human exposure and further damage to building materials and furnishings. Porous materials that are wet and have mold growing on them may have to be discarded because molds can infiltrate porous substances and grow on or fill in empty spaces or crevices. This mold can be difficult or impossible to remove completely.

As a general rule, simply killing the mold, for example, with biocide is not enough. The mold must be removed, since the chemicals and proteins, which can cause a reaction in humans, are present even in dead mold.

A variety of cleanup methods are available for remediating damage to building materials and furnishings caused by moisture control problems and mold growth. The specific method or group of methods used will depend on the type of material affected. Some methods that may be used include the following:

**Wet Vacuum**

Wet vacuums are vacuum cleaners designed to collect water. They can be used to remove water from floors, carpets, and hard surfaces where water has accumulated. They should not be used to vacuum porous materials, such as gypsum board. Wet vacuums should be used only on wet materials, as spores may be exhausted into the indoor environment if insufficient liquid is present. The tanks, hoses, and attachments of these vacuums should be thoroughly cleaned and dried after use since mold and mold spores may adhere to equipment surfaces.

**Damp Wipe**

Mold can generally be removed from nonporous surfaces by wiping or scrubbing with water and detergent. It is important to dry these surfaces quickly and thoroughly to discourage further mold growth. Instructions for cleaning surfaces, as listed on product labels, should always be read and followed.20

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20 Other common remediation methods available include hand sanding and wire brushing, sandblasting, soda blasting, foggers, and spraying a biocide.
HEPA Vacuum

HEPA (High-Efficiency Particulate Air) vacuums are recommended for final cleanup of remediation areas after materials have been thoroughly dried and contaminated materials removed. HEPA vacuums also are recommended for cleanup of dust that may have settled on surfaces outside the remediation area. Care must be taken to assure that the filter is properly seated in the vacuum so that all the air passes through the filter. When changing the vacuum filter, remediators should wear respirators, appropriate personal protective clothing, gloves, and eye protection to prevent exposure to any captured mold and other contaminants. The filter and contents of the HEPA vacuum must be disposed of in impermeable bags or containers in such a way as to prevent release of the debris.

Disposal of Damaged Materials

Building materials and furnishings contaminated with mold growth that are not salvageable should be placed in sealed impermeable bags or closed containers while in the remediation area. These materials can usually be discarded as ordinary construction waste. It is important to package mold-contaminated materials in this fashion to minimize the dispersion of mold spores. Large items with heavy mold growth should be covered with polyethylene sheeting and sealed with duct tape before being removed from the remediation area. Some jobs may require the use of dust-tight chutes to move large quantities of debris to a dumpster strategically placed outside a window in the remediation area.

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Mold Remediation Guidelines

This section presents remediation guidelines for building materials that have or are likely to have mold growth. The guidelines are designed to protect the health of cleanup personnel and other workers during remediation. These guidelines are based on the size of the area impacted by mold contamination. Please note that these are guidelines; some professionals may prefer other remediation methods, and certain circumstances may require different approaches or variations on the approaches described below. If possible, remediation activities should be scheduled during off-hours when building occupants are less likely to be affected.

Although the level of personal protection suggested in these guidelines is based on the total surface area contaminated and the potential for remediator or occupant exposure, professional judgment always should play a part in remediation decisions. These
remediation guidelines are based on the size of the affected area to make it easier for remediators to select appropriate techniques, not on the basis of research showing there is a specific method appropriate at a certain number of square feet. The guidelines have been designed to help construct a remediation plan. The remediation manager should rely on professional judgment and experience to adapt the guidelines to particular situations. When in doubt, caution is advised. Consult an experienced mold remediator for more information.

**Level I: Small Isolated Areas (10 sq. ft or less)** - e.g., ceiling tiles, small areas on walls. Remediation can be conducted by the regular building maintenance staff as long as they are trained on proper clean-up methods, personal protection, and potential health hazards. This training can be performed as part of a program to comply with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Respiratory protection (e.g., N-95 disposable respirator) is recommended. Respirators must be used in accordance with the OSHA respiratory protection standard (29 CFR 1910.134). Gloves and eye protection should be worn.

The work area should be unoccupied. Removing people from spaces adjacent to the work area is not necessary, but is recommended for infants (less than 12 months old), persons recovering from recent surgery, immune-suppressed people, or people with chronic inflammatory lung diseases (e.g., asthma, hypersensitivity pneumonitis, and severe allergies).

Containment of the work area is not necessary. Dust suppression methods, such as misting (not soaking) surfaces prior to remediation, are recommended.

Contaminated materials that cannot be cleaned should be removed from the building in a sealed impermeable plastic bag. These materials may be disposed of as ordinary waste.

The work area and areas used by remediation workers for egress should be cleaned with a damp cloth or mop and a detergent solution.

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21 Reminder – Completing an awareness class does not constitute training to perform mold remediation be they OSHA, EPA, NYC, or ACGIH recommendations. Training on proper (Level I - IV) clean-up methods, personal protection, and potential health hazards must be part of the class agenda in order for its participants to perform mold clean-up and/or remediation tasks.
All areas should be left dry and visibly free from contamination and debris.

**Level II: Mid-Sized Isolated Areas (10-30 sq. ft.)** – e.g., individual wallboard panels. **Remediation can be conducted by the regular building maintenance staff.** Such persons should receive training on proper clean-up methods, personal protection, and potential health hazards. This training can be performed as part of a program to comply with the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Respiratory protection (e.g., N-95 disposable respirator) is recommended. Respirators must be used in accordance with the OSHA respiratory protection standard (29 CFR 1910.134). Gloves and eye protection should be worn.

The work area should be unoccupied. Removing people from spaces adjacent to the work area is not necessary, but is recommended for infants (less than 12 months old), persons recovering from recent surgery, immune-suppressed people, or people with chronic inflammatory lung diseases (e.g., asthma, hypersensitivity pneumonitis, and severe allergies).

Surfaces in the work area that could become contaminated should be covered with a secured plastic sheet(s) before remediation to contain dust/debris and prevent further contamination.

Dust suppression methods, such as misting (not soaking) surfaces prior to remediation, are recommended.

Contaminated materials that cannot be cleaned should be removed from the building in a sealed impermeable plastic bag. These materials may be disposed of as ordinary waste.

The work area and areas used by remediation workers for egress should be HEPA vacuumed and cleaned with a damp cloth or mop and a detergent solution.

All areas should be left dry and visibly free from contamination and debris.

**Level III: Large Isolated Areas (30 –100 square feet)** – e.g., several wallboard panels. **Industrial hygienists or other environmental health and safety professionals with experience performing microbial investigations and/or mold remediation should be consulted prior to remediation activities to provide oversight for the project.** The following procedures may be implemented depending upon the severity of the contamination:
It is recommended that personnel be trained in the handling of hazardous materials and equipped with respiratory protection (e.g., N-95 disposable respirator). Respirators must be used in accordance with the OSHA respiratory protection standard (29 CFR 1910.134). Gloves and eye protection should be worn.

Surfaces in the work area and areas directly adjacent that could become decontaminated should be covered with a secured plastic sheet(s) before remediation to contain dust/debris and prevent further contamination.

Seal ventilation ducts/grills in the work area and areas directly adjacent with plastic sheeting.

The work area and areas directly adjacent should be unoccupied. Removing people from spaces near the work area is recommended for infants, persons having undergone recent surgery, immune suppressed people, or people with chronic inflammatory lung diseases. (e.g., asthma, hypersensitivity pneumonitis, and severe allergies).

Dust suppression methods, such as misting (not soaking) surfaces prior to mediation, are recommended.

Contaminated materials that cannot be cleaned should be removed from the building in sealed impermeable plastic bags. These materials may be disposed of as ordinary waste.

The work area and surrounding areas should be HEPA vacuumed and cleaned with a damp cloth or mop and a detergent solution.

All areas should be left dry and visibly free from contamination and debris.

Note: If abatement procedures are expected to generate a lot of dust (e.g., abrasive cleaning of contaminated surfaces, demolition of plaster walls) or the visible concentration of the mold is heavy (blanket coverage as opposed to patchy), it is recommended that the remediation procedures for Level IV be followed.

**Level IV: Extensive Contamination (greater than 100 contiguous square feet in an area).** Industrial hygienists or other environmental health and safety professionals with experience performing microbial investigations and/or mold
remediation should be consulted prior to remediation activities to provide oversight for the project.

The following procedures may be implemented depending upon the severity of the contamination:

- Personnel trained in the handling of hazardous materials and equipped with:
  - Full face piece respirators with HEPA cartridges;
  - Disposable protective clothing covering entire body including both head and shoes, and Gloves.

Containment of the affected area:

- Complete isolation of work area from occupied spaces using plastic sheeting sealed with duct tape (including ventilation ducts/grills, fixtures, and other openings);
- The use of an exhaust fan with a HEPA filter to generate negative pressurization; and
- Air locks and decontamination room.  

If containment practices effectively prevent mold from migrating from affected areas, it may not be necessary to remove people from surrounding work areas. However, removal is still recommended for infants, persons having undergone recent surgery, immune-suppressed people, or people with chronic inflammatory lung diseases. (e.g., asthma, hypersensitivity pneumonitis, and severe allergies).

Contaminated materials that cannot be cleaned should be removed from the building in sealed impermeable plastic bags. The outside of the bags should be cleaned with a damp cloth and a detergent solution or HEPA vacuumed in the decontamination chamber prior to their transport to uncontaminated areas of the building. These materials may be disposed of as ordinary waste.

The contained area and decontamination room should be HEPA vacuumed and cleaned with a damp cloth or mopped with a detergent solution and be visibly clean prior to the removal of isolation barriers.

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22 CPWR – The directions in this Bulletin about containment, decontamination, and cleanup lack specifics.
Personal Protective Equipment (PPE)

Any remediation work that disturbs mold and causes mold spores to become airborne increases the degree of respiratory exposure. Actions that tend to disperse mold include: breaking apart moldy porous materials such as wallboard; destructive invasive procedures to examine or remediate mold growth in a wall cavity; removal of contaminated wallpaper by stripping or peeling; using fans to dry items or ventilate areas.

The primary function of personal protective equipment is to prevent the inhalation and ingestion of mold and mold spores and to avoid mold contact with the skin or eyes. The following sections discuss the various types of PPE that may be used during remediation activities.

Skin and Eye Protection

Gloves protect the skin from contact with mold, as well as from potentially irritating cleaning solutions. Long gloves that extend to the middle of the forearm are recommended. The glove material should be selected based on the type of substance/chemical being handled. If you are using a biocide such as chlorine bleach, or a strong cleaning solution, you should select gloves made from natural rubber, neoprene, nitrile, polyurethane, or PVC. If you are using a mild detergent or plain water, ordinary household rubber gloves may be used.

To protect your eyes, use properly fitted goggles or a full face piece respirator. Goggles must be designed to prevent the entry of dust and small particles. Safety glasses or goggles with open vent holes are not appropriate in mold remediation.

Respiratory Protection

Respirators protect cleanup workers from inhaling airborne mold, contaminated dust, and other particulates that are released during the remediation process. Either a half mask or full face piece air-purifying respirator can be used. A full face piece respirator provides both respiratory and eye protection. Please refer to the discussion of the different levels of remediation to ascertain the type of respiratory protection recommended. Respirators used to provide protection from mold and mold spores must be certified by the National Institute for Occupational Safety and Health (NIOSH). More protective respirators
may have to be selected and used if toxic contaminants such as asbestos or lead are encountered during remediation.

As specified by OSHA in 29 CFR 1910.134 individuals who use respirators must be properly trained, have medical clearance, and be properly fit tested before they begin using a respirator. In addition, use of respirators requires the employer to develop and implement a written respiratory protection program, with worksite-specific procedures and elements.

**Protective Clothing**

While conducting building inspections and remediation work, individuals may encounter hazardous biological agents as well as chemical and physical hazards. Consequently, appropriate personal protective clothing (i.e., reusable or disposable) is recommended to minimize cross-contamination between work areas and clean areas, to prevent the transfer and spread of mold and other contaminants to street clothing, and to eliminate skin contact with mold and potential chemical exposures.

Disposable PPE should be discarded after it is used. It should be placed into impermeable bags, and usually can be discarded as ordinary construction waste. Appropriate precautions and protective equipment for biocide applicators should be selected based on the product manufacturer’s warnings and recommendations (e.g., goggles or face shield, aprons or other protective clothing, gloves, and respiratory protection).

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**Remediation Equipment**

There are various types of equipment useful in mold assessment and remediation. Some of the more common items include:

✔ **Moisture Meters**

Moisture meters measure/monitor moisture levels in building materials, and may be helpful for measuring the moisture content in a variety of building materials following water damage. They also can be used to monitor the progress of drying damaged materials. These direct reading devices have a thin probe that is inserted into the material to be tested or pressed directly against the surface of the material. Moisture meters can be used on materials such as carpet, wallboard, wood, brick, and concrete.
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✓ Humidity Gauges or Meters

Humidity meters can be used to monitor indoor humidity. Inexpensive (less than $50) models that monitor both temperature and humidity are available.

✓ Humidistat

A humidistat is a control device that can be connected to an HVAC system and adjusted so that if the humidity level rises above a set point, the HVAC system will automatically turn on and reduce the humidity below the established point.

✓ Boroscope

A boroscope is a hand-held tool that allows users to see potential mold problems inside walls, ceiling plenums, crawl spaces, and other tight areas. It consists of a video camera on the end of a flexible “snake.” No major drilling or cutting of dry wall is required.

✓ HVAC System Filter

High-quality filters must be used in a HVAC system during remediation because conventional HVAC filters are typically not effective in filtering particles the size of mold spores. Consult an engineer for the appropriate filter efficiency for your specific HVAC system, and consider upgrading your filters if necessary. A filter with a minimum efficiency of 50 to 60% or a rating of MERV 8, as determined by Test Standard 52.2 of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, may be appropriate.

Remember to change filters as appropriate, especially following any remediation activities. Remove filters in a manner that minimizes the reentry of mold and other toxic substances into the workplace. Under certain circumstances, it may be necessary to wear appropriate PPE while performing this task.

How Do You Know When You Have Finished Remediation/Cleanup?

✏️ You must have identified and completely corrected the source of the water or moisture problem.

✏️ Mold removal should be complete. Visible mold, mold-damaged materials, and moldy odors should no longer be present.
Sampling, if conducted, should show that the level and types of mold and mold spores inside the building are similar to those found outside.

You should revisit the site(s) after remediation, and it should show no signs of moldy or musty odors, water damage, or mold growth.

Conclusion

After correcting water or moisture infiltration, the prompt removal of contaminated material and structural repair is the primary response to mold contamination in buildings. In all situations, the underlying cause of water accumulation must be rectified or the mold growth will reoccur. Emphasis should be placed on preventing contamination through proper building and HVAC system maintenance and prompt repair of water damaged areas.

Effective communication with building occupants is an essential component of all large-scale remediation efforts. The building owner, management, and/or employer should notify occupants in the affected area(s) of the presence of mold. Notification should include a description of the remedial measures to be taken and a timetable for completion. Group meetings held before and after remediation with full disclosure of plans and results can be an effective communication mechanism. Individuals with persistent health problems that appear to be related to mold exposure should see their physicians for a referral to practitioners who are trained in occupational/environmental medicine or related specialties and are knowledgeable about these types of exposures.

The **QUICK CARDS** on the next two pages are not a part of OSHA Safety & Health Bulletin **SHIB 03-10-10**, but they are an additional mold education resource available at OSHA’s website, OSHA.gov. Click in the Letter “Q” in the Site Search line at the top of the OSHA web page. Click on the Quick Cards link. Click on Mold Quick Card [English: PDF | HTML; Spanish: PDF | HTML | Vietnamese: PDF] for your desired language and format.
Mold

Molds are microscopic organisms found everywhere in the environment, indoors and outdoors. When present in large quantities, molds have the potential to cause adverse health effects.

**Health Effects of Mold Exposure**
- Sneezing
- Runny nose
- Eye irritation
- Cough and congestion
- Aggravation of asthma
- Dermatitis (skin rash)

**People at Greatest Risk of Health Effects**
- Individuals with allergies, asthma, sinusitis, or other lung diseases.
- Individuals with a weakened immune system (e.g., HIV patients).

**How to Recognize Mold**
- Sight – Usually appear as colored woolly mats.
- Smell – Often produce a foul, musty, earthy smell.

**Preventing Mold Growth**
- Remove excess moisture with a wet-dry vacuum and dry out the building as quickly as possible.
- Use fans to assist in the drying process.
- Clean wet materials and surfaces with detergent and water.
- Discard all water damaged materials.
- Discard all porous materials that have been wet for more than 48 hours.

**General Mold Cleanup Tips**
- Identify and correct moisture problem.
- Make sure working area is well ventilated.
- Discard mold damaged materials in plastic bags.
- Clean wet items and surfaces with detergent and water.
- Disinfect cleaned surfaces with 1/4 to 1 1/2 cup household bleach in 1 gallon of water. **CAUTION: Do not mix bleach with other cleaning products that contain ammonia.**
- Use respiratory protection. A N-95 respirator is recommended.
- Use hand and eye protection.

For more complete information:

OSHA
Occupational Safety and Health Administration
U.S. Department of Labor
www.osha.gov  (800) 352-OSHA
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Moho

El moho es un organismo microscópico que se encuentra por todas partes en el ambiente, en el interior y exterior. Cuando el moho está presente en cantidades grandes, tiene el potencial de causar efectos adversos a la salud.

**Efectos en la salud por Exposición al Moho**
- Estornudos
- Gotearón (gotear) nasal
- Ojos irritados
- Tos y congestion
- Empeora el asma
- Dermatitis (sarpullido en la piel)

**Personas en Mayor Riesgo de Problemas de Salud**
- Individuos con alergias, asma, sinusitis o enfermedades pulmonares.
- Individuos con un sistema inmunológico debilitado (por ejemplo: pacientes de VIH)

**Cómo Reconocer el Moho**
- Vista – Aparece generalmente como una alfombra peluda de colores.
- Olor – Frecuentemente produce un olor repugnante, a lugar cerrado y a tierra.

**Evitando el Crecimiento de Moho**
- Remueva el exceso de humedad con una aspiradora y seque el edificio lo antes posible.
- Uso abanicos para ayudar en el proceso de secado.
- Limpie con detergente y agua los materiales y superficies mojadas.
- Deseche todos los materiales dañados por el agua.
- Deseche todos los materiales porosos que han estado mojados por más de 48 horas.

**Consejos para una limpieza de moho general**
- Identifique y corrija el problema de humedad.
- Asegúrese que las áreas de trabajo estén bien ventiladas.
- Deseche en bolsas plásticas los materiales dañados por el moho.
- Limpie con detergente y agua los artículos y superficies mojadas.
- Desinfecte las superficies con 1/4 hasta 1 1/2 de taza de blanqueador casero en un galón de agua. CUIDADO: No mezcle el blanqueador con otros productos de limpieza que contengan amoníaco.
- Use protección respiratoria. Se recomienda un respirador N-95.
- Use protección para manos y ojos.

Para información más completa:

OSHA
Administración de Seguridad y Salud Ocupacional
Departamento del Trabajo de EE.UU.
www.osha.gov (800) 321-OSHA

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References

American Conference of Governmental Industrial Hygienists 1999. Bioaerosols Assessment and Control
http://www.acgih.org

National Apartment Association
http://www.naahq.org

National Institute for Occupational Safety and Health (NIOSH)
http://www.cdc.gov/niosh/

National Multi-Housing Council
http://www.nmhc.org

The Building Owners and Managers Association International (BOMA)
http://www.boma.org

New York City Department of Health & Mental Hygiene Bureau of Environmental & Occupational Disease Epidemiology 2002. Guidelines on Assessment and Remediation of Fungi in Indoor Environments


Mold Resources List

Business owners who are concerned about the cost of professional help can contact the OSHA Consultation Project Office in their state for free consultation service. Priority is given to businesses with fewer than 250 employees at a worksite, with further
consideration given to the severity of the worksite problem. The Consultation Program can help the employer evaluate and prevent hazardous conditions in the workplace that can cause injuries and illnesses, including mold problems.

The following list of resources includes information developed and maintained by public and private organizations. However, OSHA does not control this information and cannot guarantee the accuracy, relevance, timeliness, or completeness of this outside information. Further, the inclusion of these resources is not intended to endorse any views expressed, or products or services offered, by the author of the reference or the organization operating the service identified by the reference.

U.S. EPA IAQ Information Clearinghouse (IAQINFO)
Phone: (800) 438-4318 or (703) 356-4020
Fax: (703) 356-5386
Email: iaqinfo@aol.com
Indoor air related documents, answers to Indoor Air Quality (IAQ) questions, maintains listing of State IAQ contacts, and regional EPA Contacts.

Air Conditioning Contractors of America (ACCA)
(703) 575-4477
http://www.acca.org
Information on indoor comfort products and services.

American College of Occupational and Environmental Medicine (ACOEM)
(847) 818-1800
http://eserver.acoem.org/physicianlocator/default.cfm
Referrals to physicians who have experience with environmental exposures.

American Conference of Governmental Industrial Hygienists, Inc. (ACGIH)
(513) 742-2020
http://www.acgih.org
Occupational and environmental health and safety information.

American Industrial Hygiene Association (AIHA)
(703) 849-8888
http://www.aiha.org
Information on industrial hygiene and indoor air quality issues including mold hazards and legal issues.
American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc. (ASHRAE)  
(800) 527-4723  
http://www.ashrae.org  
Information on engineering issues and indoor air quality.

Association of Occupational and Environmental Clinics (AOEC)  
(202) 347-4976  
http://www.aoec.org  
Referrals to clinics with physicians, who have experience with environmental exposures, include exposure to mold; maintains a database of occupational and environmental cases.

Association of Specialists in Cleaning and Restoration (ASCR)  
(800) 272-7012 or (410) 729-3603  
http://www.ascr.org/institutes  
Carpet and Upholstery Cleaning Institute, Mechanial Systems Hygiene Institute, National Institute of Disaster Restoration, National Institute Rug Cleaning, Water Loss Institute referrals to professionals.

American Academy of Allergy, Asthma & Immunology (AAAAI)  
(800) 822-2762  
http://www.aaaai.org  
Physician referral directory, information on allergies and asthma.

Asthma and Allergy Foundation of American (AAFA)  
(800) 7ASTHMA (800) 727-8462  
http://www.aafa.org  
Information on allergies and asthma.

American Lung Association (ALA)  
(800) LUNGUSA (800) 586-4872  
http://www.lungusa.org  
Information on allergies and asthma.

Allergy and Asthma Network Mothers of Asthmatics (AANMA)  
(800) 878-4403 or (703) 641-9595  
http://www.aanma.org  
Information on allergies and asthma.

National Institute of Allergy and Infectious Diseases (NIAID)  
(301) 496-5717  
Information on allergies and asthma.
National Jewish Medical and Research Center  
(800) 222LUNG (800) 222-5864  
http://www.njc.org  
Information on allergies and asthma.

Carpet and Rug Institute (CRI)  
(800) 882-8846  
http://www.carpet-rug.com  
Carpet maintenance, restoration guidelines for water-damaged carpet, other carpet-related issues.

Centers for Disease Control and Prevention (CDC)  
(800) 311-3435  
Information on health-related topics including asthma and molds in the environment, and occupational health. CDC is recognized as the lead federal agency for protecting the health and safety of the American people at home and abroad. It serves as the national focus for developing and applying disease prevention and control, environmental health, and health promotion and education activities.

Floods/Flooding  
Federal Emergency Management Agency (FEMA)  
(800) 480-2520  
Publications on floods, flood proofing, etc.

University of Minnesota, Department of Environmental Health and Safety  
(612) 626-5804  
http://www.dehs.umn.edu/iaq/flood.html  
Managing water infiltration into buildings.

Indoor Environmental Remediation Board (IERB)  
(215) 387-4097  
http://www.ierb.org  
Information on best practices in building remediation.

Institute of Inspection, Cleaning and Restoration Certification (IICRC)  
(360) 693-5675  
http://www.iicrc.org  
Information on and standards for the inspection, cleaning, and restoration industry.
International Sanitary Supply Association (ISSA)
(800) 225-4772
http://www.issa.com
Education and training on cleaning and maintenance.

National Air Duct Cleaners Association (NADCA)
(202) 737-2926
http://www.nadca.com
Duct cleaning information.

National Institute of Building Sciences (NIBS)
(202) 289-7800
http://www.nibs.org
Information on building regulations, science, and technology.

National Institute for Occupational Safety and Health (NIOSH)
(800) 35NIOSH (800) 356-4674)
Health and safety information with a workplace orientation.

National Pesticide Information Center (NPIC)
(800) 858-7378
http://npic.orst.edu/
Information on pesticides/antimicrobial chemicals, including safety and disposal information.

New York City Department of Health, Bureau of Environmental and Occupational Disease Epidemiology, Guidelines on Assessment and Remediation of Fungi in Indoor Environments
(212) 788-4290

Occupational Safety and Health Administration (OSHA)
(800) 321-OSHA (800) 321-6742)
Information on worker safety and health, compliance assistance, laws and regulations, cooperative programs, state programs, statistics, and newsroom.

Sheet Metal and Air Conditioning Contractors’ National Association (SMACNA)
(703) 803-2980
http://www.smacna.org
Technical information on topics such as air conditioning and air ducts.