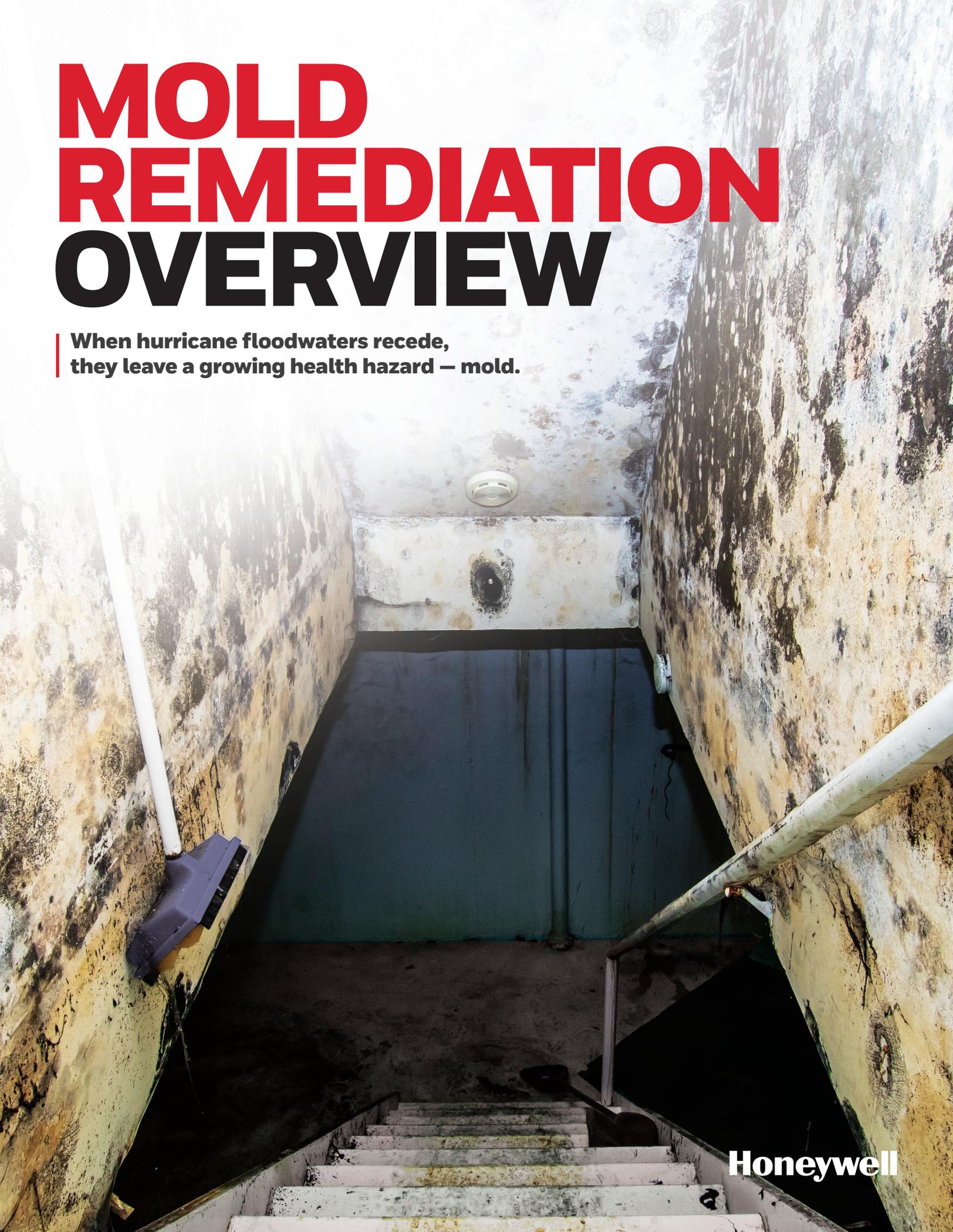


# MOLD REMEDIATION OVERVIEW

When hurricane floodwaters recede, they leave a growing health hazard – mold.



Honeywell

# **NIOSH AND OSHA RECOMMENDATIONS**

**Floodwaters caused by hurricanes, rising rivers from torrential rains and other natural disasters can leave a wake of destruction. And after the immediate cleanup, workers may encounter mold.**

Many types of mold are innocuous, but other types can be extremely toxic, and prolonged exposure to it — even benign or dead mold — can result in a heightened sensitivity, leading to allergic reactions and respiratory disorders.

There are no federal government standards or regulations for mold exposure. However, any remediation work that disturbs mold spores and causes them to become airborne increases the degree of respiratory exposure. Therefore, government agencies have provided guidelines on personal protective equipment (PPE) for workers.

The level of recommended protection increases with the size and scope of the infected site. Minimum protection includes an N95 respirator, gloves and goggles, while more comprehensive protection includes a full-facepiece respirator with P100 filters, body suit, boots, gloves and head protection.

# Q&A

## **What is mold?**

Molds are fungi that can be found anywhere, growing on virtually any substance, as growth requires only moisture, oxygen and an organic source. Molds reproduce by creating tiny spores, which continually float through the air. Molds and mold spores are classified as particulates, so these are considerations for respiratory protection.

## **Are molds harmful?**

Most molds are harmless — think of cheese and mushrooms — but some molds can cause respiratory and other disorders, with inhalation as the primary route of exposure. Persons with allergies are particularly susceptible. People with weakened immune systems or chronic lung disease may develop mold infections in their lungs. Direct contact with mold can cause dermatitis in people who are allergic to mold.

## **I don't see any mold. How do I know whether it is present?**

Visual signs are usually the best way to determine the presence of mold, but it also grows in hidden places, such as behind walls. To detect hidden mold, you can have the air monitored. This process can be expensive and should be performed by someone trained in microbial investigations.

## **Even if mold has been killed with a biocide (chlorine or other solution), is it still dangerous?**

Yes. Even dead mold can cause allergic reactions.

## **What type of respirator is required for protection from mold?**

There is not an established permissible exposure limit (PEL) or threshold limit value (TLV) for mold; therefore, a specific type of respirator is not required. However, the Environmental Protection Agency (EPA) recommends a respirator with N95 or P100 filters.

## **What respirator does Honeywell recommend?**

Depending on the size of the remediation job, the biocides used and other contaminants that may be present, Honeywell recommends an N95 respirator as the most basic protection. For more protection, we recommend a half-mask or full facepiece with OV/AG/P100 or a multi-contaminant respirator like the Defender full facepiece with P100 filters. For larger remediation jobs, consider a powered air-purifying respirator (PAPR) with OV/AG/HEPA. For unknown hazards — including a confined space or atmosphere that could be immediately dangerous to life or health (IDLH) — you may need a PD-SAR or SCBA.

## **Why does Honeywell recommend an organic vapor/acid gas (OV/AG) cartridge filter combination since mold is a particulate?**

Workers need to be protected from the solutions that are used to remediate mold, usually an acid gas. Some molds give off gases and vapors that are referred to as microbial volatile organic compounds (MVOC).

## **Should I always use an organic vapor/acid gas (OV/AG) cartridge filter combination?**

No. A particulate filter is sufficient if you know that there are no other contaminants present, the mold is not emitting gases or vapors, and you are tearing down infected substances rather than using a biocide to kill mold. But if you are unsure, we recommend the added protection of an OV/AG filter combination.

## **Why does Honeywell recommend a P100 instead of an N95 filter for some exposures?**

While there are no PELs established for mold, workers would benefit from a P100 when exposed to higher concentrations of mold. Other contaminants must also be considered, especially the presence of lead and asbestos in older buildings.

## **What gloves should I use?**

Use gloves that will protect the skin from direct contact with mold, as well as all the chemicals that may be present, including the solutions used to kill mold. Nitrile gloves offer sufficient protection for most applications. Refer to the [Honeywell North® Selection Guide](#) for more information.

## **Why do I need eye protection?**

Mold and mold spores can be eye irritants, so goggles are advisable with half-mask and disposable respirators. For prolonged exposure or for remediation of large areas (more than 100 square feet), Honeywell recommends a full facepiece.

## **About Honeywell Industrial Safety**

Honeywell Industrial Safety helps build an enduring culture of safety through comprehensive education, innovative technologies, and comfortable, high-performance products that inspire workers to make safer choices on their own. Our company is the ideal partner for organizations committed to a cultural transformation that minimizes injuries and maintains a safer, more productive workplace.

### **For More Information**

[www.honeywellsafety.com](http://www.honeywellsafety.com)

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