

Personal Protective Equipment

## What Respirator Do I Need?

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Selecting the most effective respirator for a specific application is not always simple, with the myriad of product options available. Honeywell is here to guide you if you are exposed to any of these common respiratory hazards:

### Pesticides

If you work with chemicals, and specifically, pesticides, look on the pesticide warning label for PPE recommendations. Newer labels will list a respirator with a NIOSH TC approval and specify whether the filter is approved for pesticides. For example, "NIOSH-approved respirator (Ex: TC-23C) with a pre-filter approved for pesticides"; or a "NIOSH-approved respirator with an organic vapor (OV) cartridge with any N, R, P, HE filter."

If the pesticide is not oil-based, you can use an N95 respirator. If it is oil-based, you need to use an "oil proof or oil-resistant" pre-filter, such as a P100. R, P, and HE filters can also be used in this situation. R filters last up to eight hours with oil. However, if you are unsure which particulate filter to use, P100 is the safest option for both oils and non-oils.

### Painting vapors

Painting materials are made up of pigments, binders, and solvents, as well as additives for drying. Water-based and solvent-based paints produce organic vapors, ammonia, or acid gas. These heavy fumes can cause dizziness, headaches, and nausea.

Furthermore, when the paint is applied by spray, from a pressurized industrial sprayer or an aerosol container, an extra aerosol particle is created. To control exposure, you need a cartridge and filter capable of capturing both VOCs and aerosols.

Combination cartridges tackle wet particles, as well as paint fog volatile emissions. Chemical cartridges include activated carbon, which protects against gases and vapors.

### Welding fumes

Welding fumes, such as hexavalent chromium, are a Group 1 Cancer-Causing Carcinogen, according to the International Agency for Research on Cancer (IARC). To protect against them, welders typically use a tight-fitting mask with a P100 filter.

However, PAPRs bear several advantages over a mask. The battery operated "blower" units and integrated filters use a motor to draw air through the filters. This ensures continuous airflow with less energy and more comfort for the welder. Workers don't need to shave either.

Read more on using PAPRs [here](#).

## Smoke

Smoke results from the incomplete combustion of materials such as wood, coal, oil, or paper. Smoke particles can rapidly clog APR filters. Some respirator components, such as hoods and facepieces may melt if exposed to a fire. Special filters are needed to protect against carbon monoxide and other gases. In these cases, SCBAs are oftentimes the best solution.

## Various specks of dust

Which respirator protects against dust, mists, fumes, or agricultural molds? Dust masks and particulate filters are effective in blocking dust, concrete, chalk, and rubber. You can wear an N95, in almost any dust situation, except for mold, asbestos, and lead. If you are working with drywall dust, for instance, a full-face mask will help protect your lungs as well as the eyes.

## Mold

Inhaling or touching mold spores can cause allergic reactions and asthma symptoms. To avoid upper and lower respiratory problems, many state OSHA plans require P100 or PAPRs with HEPA filters.

Honeywell recommends N95, R95, or P95 filters as the most basic protection. But if you are working in areas around 100 square feet, with heavy mold and substantial release of dust, you need a half-face air-purifying respirator equipped with N100, R100, or P100 filters for better protection.

Read more about respiratory PPE for mold cleanup [\*here\*](#).

## Asbestos and lead

It's best to check your state or local regulations before performing work with asbestos or lead.

## Woodworking

Exposure to wood dust is particularly frequent in pulp and paper manufacturing, construction carpentry and wood furniture work. When workers mill and drill sand lumber, sawdust, or wood, they expose themselves to particles that can cause asthma, respiratory allergies, skin rashes, and even cancer.

***Wood dust is a Group I carcinogen.***

Also, during furniture and cabinet-making, parquet floor sanding or varnishing, workers might be exposed to formaldehyde.

That's ***why OSHA limits exposure*** to dust should not exceed 15mg/m<sup>3</sup> (total dust) and 5 mg/m<sup>3</sup> (respirable dust), based on an 8-hour TWA. When looking for a wood mask for woodworking, make sure it's NIOSH-certified. P100 filters should provide enough protection.

Lastly, comfort, fit, and price are also important when deciding on respiratory protection. Regardless of the brand you choose, it's important to wear suitable respiratory protection in these environments.

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