

3M Mold Remediation Respirator Kit

Please Read - Important Information from 3M™ Regarding Respiratory Protection During Exposure to Mold

Mold remediation is a rapidly growing field. The following is some basic information on the health hazards associated with mold and proper use of respiratory protection during mold remediation.

Why should I be concerned about being exposed to mold?

Mold is a type of fungus that can grow and live in organic matter including many building materials, especially when elevated moisture levels are present. Some molds release spores that are small enough to remain airborne. Fungi can also release low levels of volatile organic compounds (VOCs) that are thought to be the source of odors associated with mold and mildew. Molds are known to cause a variety of health effects if spores are inhaled into lungs, swallowed, or if they get into the eyes, nose or open cuts. These health effects may include irritation of the eyes, skin, nose, throat and lungs as well as allergenic affects, asthma, runny nose, eye infection, dizziness, fatigue, nausea and infection of immune-compromised or immune-suppressed individuals. It is recommended that all persons with asthma, hypersensitivity pneumonitis, severe allergies, immune suppression, or other chronic inflammatory lung diseases be removed from the mold-contaminated area until remediation is complete and not participate in mold remediation.

Will wearing a respirator protect me from exposure to mold?

Use of respiratory protection, along with the appropriate gloves, goggles, disposable coveralls, full body clothing, head gear, and foot coverings, may help reduce exposure to certain airborne

contaminants including those from mold. However, since safe exposure levels to mold have not been established, respirators cannot guarantee the elimination of exposure or the risk of contracting illness, disease or infections. Misuse of respirators may result in sickness or death. Therefore it is very important that you read all the *User Instructions* that come with a respirator and wear it at all times when you are in the contaminated area.

What type of respirator should I wear to reduce exposure to mold?

Currently, there are no published exposure limits for mold. However, the United States Environmental Protection Agency (EPA) and the New York City Department of Health have recently published recommendations on selecting respirators for mold remediation activities based upon the size of the contaminated area. For areas less than 10 square feet, filtering facepiece respirators (N95 disposable respirators) or half masks with replaceable particulate filters may be used in conjunction with goggles. For areas between 10 and 100 square feet, either half mask or full facepiece respirators with particulate filters should be used. Full facepiece respirators with 100 level particulate filters (N100, R100 or P100) should be used for remediation of areas greater than 100 square feet. The full facepiece may also be used as part of a powered air purifying respirator (PAPR) system. Professional judgment should be used depending upon the density of the growth, toxicity of the mold (if known), possibility of hidden mold, potential for aerosolizing the mold, and the needs of the wearer. Tables 1-3 give examples of some of the 3M respirators that meet the above descriptions, but are not all-inclusive.

What types of cartridges or filters should I use to reduce exposure to the microbial VOCs or the disinfectants?

In order to reduce exposure to the VOCs that are produced by mold, 3M recommends the use of a particulate filter with nuisance level organic vapor relief or an organic vapor cartridge in addition to the particulate filter mentioned above. Gases and vapors associated with disinfectants (e.g. chlorine or ammonia) should be measured, and

may warrant the use of an appropriate chemical cartridge in conjunction with the particulate filter. Cartridges and filters are available for half masks, full facepieces or PAPRs depending upon the concentration level of the disinfectants. Respirators that offer higher levels of protection are available if the concentrations are immediately dangerous to life or health (IDLH) or if the oxygen concentration is less than 19.5%. This may be a concern especially when working in confined spaces.

How often do I need to change the cartridges or filters?

Particulate filters should be changed if increased breathing resistance is noted, filters are physically damaged, or earlier if taste, smell or irritation from the contaminant is detected. No guidance was given from EPA or NYC with regards to changing filters. A change schedule for chemical cartridges should be implemented based upon the chemical concentration measured in the workplace. 3M[®] Service Life Software may be used to calculate service life of 3M chemical cartridges.

What type of training is required before wearing a respirator?

Training in respiratory protection by qualified individuals is recommended before performing any remediation activity. The use of NIOSH-certified respirators in workplace environments must be accompanied by a full respiratory protection program as specified in OSHA 29 CFR 1910.134. Important components of a respiratory protection program include written standard operating procedures, medical evaluation, user training, respirator cleaning and maintenance, and properly fitting the respirator to the user. Half mask and full facepiece respirators (including those used in powered air and supplied air systems) are not protective if facial hair interferes with the face seal, since proper fit cannot be assured.

Which 3M respirators can I use to reduce my exposure to mold?

Tables 1-3 give examples of some, but not all of the 3M respirators that meet the descriptions given in the EPA and New York City guidelines for mold remediation. **Gases and vapors associated**

with disinfectants (e.g. chlorine, chlorine dioxide, ammonia, etc.) should be measured, and may warrant the use of an appropriate chemical cartridge in conjunction with the particulate filter.

Goggles without vents must be worn with half mask respirators. For more information on respiratory protection, contact your company's health and safety officer, respirator supplier, or 3M in the USA at 1-800-243-4630 (in Canada call 1-800-267-4414), or visit our web site at <http://www.mmm.com/occsafety>.

Table 1. Example of 3M[™] Filtering Facepiece Respirators

Type of respirator	Filtering Facepiece Respirator
95 level filter (with nuisance level organic vapor relief)	8577 (P95)

Table 2. Examples of 3M[™] Negative Pressure Respirators with Replaceable Cartridges and Filters

Type of air purifying element	Filters or cartridges to be used with Half mask (6100, 6200 or 6300) or Full facepiece (6700, 6800, 6900)
100 level filter (with nuisance level organic vapor relief)	2097 (P100)

Table 3. Example of 3M[™] Powered Air Purifying Respirators (PAPRs)

Type of air purifying element	Filters or cartridges to be used with GVP-Belt Mounted PAPR Assemblies
HEPA filter and organic vapor	GVP-441

For more information on mold remediation from the EPA and the New York City Department of Health please see the following documents:

- § United States Environmental Protection Agency. *Mold Remediation in Schools and Commercial Buildings*. 2001. <http://www.epa.gov/iaq/molds/index.html>
- § New York City Department of Health, Bureau of Environmental & Occupational Disease Epidemiology. *Guidelines on Assessment and Remediation of Fungi in Indoor Environments*. 2000. <http://www.ci.nyc.ny.us/html/doh/html/epi/moldrpt1.html>