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FAQ

Release 2, August 2017

Frequently Asked Questions: Potential Hazards and Respiratory Protection After a Flood or a Hurricane

What types of hazards are typically present after a flood or a hurricane?

According to the Centers for Disease Control and Prevention (CDC) there are a number of potential hazards present after a hurricane. These typically include: floodwater; contaminated food and water; electrical hazards from damaged power lines and electrical equipment; unstable buildings; wild or stray animals; carbon monoxide from camp stoves and generators; mosquitoes and other insects; hazardous chemicals; and mold growth. Effects to workers may also include: physical and emotional strain; musculoskeletal injuries from moving objects; heat stress and dehydration; and infection of open wounds and cuts. For further information, please see the CDC web site at https://www.cdc.gov/disasters/index.html. Additional information can be found in 3M Technical Data Bulletin 184: Above the Shoulders PPE for Flood and Hurricane Recovery.

Do I need to wear a respirator after a flood or a hurricane to help prevent disease transmission?

CDC has stated that "widespread outbreaks of infectious disease after floods and hurricanes are not common in the United States" and that "decaying bodies create very little risk for major disease outbreaks." However, when dealing with human remains, a face shield or goggles and a surgical mask may be used to help reduce exposure to splashes of blood, body fluids, or fecal matter. In addition, high levels of contaminants are often found in floodwaters. In these instances, the best preventive measures are to wear protective clothing and use good hygiene practices such as hand washing. Please see https://www.cdc.gov/disasters/index.html for more information.

What types of respiratory hazards may typically be present after a hurricane?

The work after a hurricane includes rescue and recovery; demolition and remediation, and construction. Respiratory hazards may be present during each of these phases. During the recovery phase, odors from human and animal remains are unpleasant. In the demolition and remediation phase, workers may be exposed to airborne dust, mold spores, asbestos fibers, hazardous chemicals, metal fume from torch cutting, etc. During construction, workers may be involved in sanding, grinding, welding, painting, etc., which can also generate airborne contaminants capable of causing respiratory effects.

What type of respirator should I wear for recovery operations?

Odors from human and animal remains are unpleasant, but are most likely not above occupational exposure limits (OEL). To help make the recovery worker's job more bearable, a National Institute for Occupational Safety and Health (NIOSH) approved respirator with nuisance level organic vapor relief is recommended. If the OEL is exceeded, a properly fitting facepiece with appropriate NIOSH certified organic vapor (OV) cartridges must be used.

Do 3M disposable respirators available in the U.S. contain natural rubber latex?

None of 3M's NIOSH approved N95, N100, R95, P95, or P100 disposable filtering facepiece respirators contain components made from natural rubber latex.

What is the difference between a government-certified respirator and a surgical mask?

Respirators are designed to help reduce the wearer's exposure to airborne particles. The primary purpose of a surgical facemask is to help prevent biological particles from being expelled by the wearer into the environment. Surgical masks are also designed to be fluid resistant to splash and splatter of blood and other infectious materials and not for reducing the wearer's exposure to ambient airborne contaminants. Surgical facemasks are not necessarily designed to seal tightly to the face, therefore the potential of air leakage around the edges exists. Even those surgical masks that appear similar to respirators have not been designed to protect the wearer from airborne hazards; hence, they should not be considered an equivalent substitute to government-approved respirators.

Some approved respirators are designed to have the characteristics of both an approved respirator and a surgical mask. In the U.S., these products are both approved by NIOSH and cleared by the U.S. Food and Drug Administration (FDA) for use in surgery.

What type of personal protective equipment (PPE) should I wear for mold abatement?

For potential exposures to mold, contact a professional mold remediator to evaluate your situation and take appropriate action. For guidance on this issue please refer to the Environmental Protection Agency at www.epa.gov. Respirators will need to be selected based on the activity and the size of the area to be remediated.

Particulate respirators, gloves, goggles, disposable coveralls, full body clothing, head gear and foot coverings may help reduce exposure to mold spores. The recommended type of respirator (e.g. half mask vs. full facepiece) and filter (e.g. 95 vs. 100) depends on the size of the area to be remediated. In order to reduce exposure to odors produced by mold, a particulate filter with nuisance level organic vapor relief, or an organic vapor cartridge in addition to a particle filter may be used. Gases and vapors associated with disinfectants (e.g. chlorine or ammonia) should be evaluated, and may warrant the use of an appropriate chemical cartridge in conjunction with the particulate filter. For more information on above the shoulders personal protective equipment during mold remediation, see 3M Technical Data Bulletin #148: United States Environmental Protection Agency Guidelines for Mold Remediation in Schools and Commercial Buildings.

What type of respirator should I wear to help reduce exposure to asbestos or lead during demolition and cleanup?

For potential exposures to asbestos or lead, contact a professional asbestos or lead remediator to evaluate your situation and take appropriate action. For guidance on this issue please refer to the Environmental Protection Agency at www.epa.gov. Respirators will need to be selected based on the activity and airborne concentration.

What type of personal protective equipment should I use if exposed to hazardous chemicals?

Professionals trained in the clean up and disposal of hazardous materials should be contacted. Call the National Response Center at 1-800-424-8802 or the National Pesticide Information Center at 1-800-858-7378. Skin and respiratory protection will be chosen based on the nature of the hazard.

What type of training is required before wearing a respirator?

The use of NIOSH-certified respirators in workplace environments must be accompanied by a full respiratory protection program as specified in the OSHA standard for respiratory protection: 29 CFR1910.134. Important components include written standard operating procedures, medical evaluation, user training, respirator cleaning and maintenance, and properly fitting the respirator to the user. Only those workers whose use of filtering facepiece respirators is voluntary (i.e., not required) in the workplace are not required to comply with the entire standard. However, they must be given a copy of Appendix D (voluntary use). Please see www.osha.gov for more information.

How important is the fit of the respirator to the wearer's face?

If a wearer cannot achieve a good fit of the respirator to the face, contaminants may enter underneath the facepiece seal. The *User Instructions* contain proper procedures for putting on the respirator and checking for a good fit and seal. A good fit can only be obtained if the face is clean-shaven in the area where the respirator seals against the face. Beards, long mustaches, and stubble may cause leaks into the respirator. It is very important to read and follow the donning instructions carefully and to conduct a fit check or user seal check every time the respirator is put on. In workplace environments, wearers with tight fitting respirators (including filtering facepieces) must be fit tested according to OSHA standard 29 CFR 1910.134. 3M recommends, but OSHA does not require, fit testing for those **voluntarily** wearing tight fitting respirators.

Are there any medical restrictions for wearing a respirator?

Individuals with a compromised respiratory system, such as asthma or emphysema, or people with a history of heart disease should consult a physician before wearing a respirator. When respirators are worn in a workplace environment, OSHA requires that employees pass a medical evaluation prior to being fit tested or wearing a respirator. Employees who **voluntarily** wear a filtering facepiece respirator do not need to be medically evaluated. Please see OSHA standard 29 CFR 1910.134 for more information.

Do respirators need to be cleaned between uses?

Reusable respirators must be cleaned as a matter of good hygiene and to help prevent facial irritation. Refer to the *User Instructions* included with the respirator and Appendix B-2 of the OSHA respirator standard (29 CFR 1910.134) for more information. Respirator wipes may be used as an interim cleaning method, but cannot be the sole method. Respirators that are shared between individuals must also be disinfected. Disposable filtering facepiece respirators may be preferred if there is a shortage of water suitable for cleaning elastomeric facepieces, as they are designed to be thrown away after they are finished being used. Please see packaging for time-use limitations.

Where can respirators and personal protective equipment be purchased?

Respirators, safety glasses and other safety equipment can be purchased through industrial safety distributors or commercial distributors where other general equipment can be found. Many retail stores such as paint stores, mass merchants and large home center retailers sell safety equipment.

Bulletin Change Summary

For the most current 3M Technical Information available to successfully use this product, please view this Bulletin electronically and click on the blue underlined links to view the relevant documents. Please read the entire Bulletin thoroughly.

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Added "flood" throughout document where applicable. Updated hyperlinks throughout document.

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