



### COVID-19 Respiratory Protection

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There are many essential workers who continue to operate their business and provide important services during the COVID-19 pandemic. These individuals include, but are not limited to, security guards, sanitary services, commercial drivers, food service workers, retail clerks, and other workers within the hospitality sector. These frontline workers play important roles in supporting the police, fire department, EMTs, nurses and medical professionals, and all other critical services helping fight the COVID-19 outbreak.

Alongside other proven risk reduction techniques, such as social distancing and self-isolation, respiratory protection is an important risk mitigation tool that can help prevent airborne exposure to COVID-19.

#### Common Types of Respirators

There are many types and styles of respirators, and not all work to protect workers against COVID-19 exposure. While some are designed to protect only against certain hazards, others offer protection against all unknown air contaminants and should be primarily used by emergency personnel such as firefighters. Within this Risk Consulting Alert, we will address the most common types of respirators available to workers to protect against COVID-19 – including “dust masks” and “surgical masks”.

#### Dust Masks

Dust masks are a type of air-purifying respirator (APRs) which purifies or filters contaminants from the air, allowing the wearer to breathe in the clean and filtered air. Dust masks may be classified using a letter designation (N, R or P) followed by a number (like 95, 99 or 100). The often-discussed “N95” face mask is derived from the following classes:

##### Respirator Rating Letter Class

N – Not oil resistant

R – Resistant to oil

P – Oil Proof

##### Respirator Rating Number Class

95 – Removes 95% of all particles at least 0.3 microns in diameter

99 – Removes 99% of all particles at least 0.3 microns in diameter

100 – Removes 99.97% of all particles 0.3 microns in diameter or larger. [HE or HEPA quality filter]

Under this classification system, the N95 mask captures 95% of particles 0.3 microns or larger and may be used in any atmosphere where there is no oil particulate. If the type of work being done involves exposure to oil mist, such as in a machine shop, then an R95 or P95 may be a better choice. According to the Occupational Safety and Health Administration (OSHA), all of the designations above may effectively protect against airborne exposure to COVID-19 when worn in accordance with manufacturer’s specifications.

These dust masks rely on a tight and proper fit between the respirator and the wearer's face, creating a barrier which, when used and sized properly, will prevent most contaminants from entering through the face/respirator seal. Once contaminants become trapped in the filtering face piece, the user breathes in the clean air. Facial hair can interfere with this seal and can allow contaminants to sneak around the facial seal. It's important to check how well the mask fits each time you put the respirator on. N95 masks have two elastic straps that go around the neck and the crown of the head. Some types may also have a plastic valve on the front. When breathing in, the air goes through the filter and when breathing out, air goes through the valve.

There are also general use dust masks that do not have the N95 designation. Although they provide some protection against dust, they have not been tested further to offer a higher level of protection. These masks often have a single elastic strap.

### **Surgical Masks**

There are also "surgical" masks, which are usually made of a folded cloth-like material. In technical terms, they are not considered respirators although they do offer some level of protection against airborne particulate contaminants and COVID-19. Since they are not designed to be as tight fitting as dust masks, contaminants can pass between the mask and the wearer's face. According to the Occupational Safety and Health Administration (OSHA), the purpose of these masks during the COVID-19 pandemic is to protect people from those who have contracted the COVID-19 virus but may not experience or show symptoms. While surgical masks may not be as effective as dust masks, they may offer a higher level of protection than opting not to wear a mask at all in public.

### **Mask Fit Testing & Other Considerations**

Obtaining a dust mask that fits properly is important. If the respirator does not form a tight seal between the respirator's sealing surface and the wearer's face, contaminants can pass through and enter the lungs. These masks are not designed for continuous long-term use and must be periodically replaced or properly cleaned. It is recommended not to share your mask with others under any circumstances. Any deformed or corroded respirators should be discarded.

OSHA requires that most intended respirator users be fit tested. Once the respirator is on and properly fitted, a tester will spray an aerosol using a bitter tasting solution, irritating smoke or other approved methodology to assure a proper fit. Prior to fit testing, OSHA requires most respirator users be evaluated by a licensed healthcare professional to assure that no underlying medical conditions are present that may make wearing the respirator hazardous.



In an occupational setting, intended respirator users must be medically cleared prior to using the device unless the dust mask is provided solely on a voluntary basis. In this instance, OSHA requires employers to provide employees with the document titled “Information for Employees Using Respirators When Not Required under the Standard” found in Appendix D of 29 CFR 1910.134. This is a self-guided questionnaire completed by the employee. If the dust mask is required to be worn by the employer, then medical clearance, fit testing and training is required under the standard.

### To Learn More:

Contact Everest’s Risk Consulting Department at (800) 269-6660 or [losscontrol@everestre.com](mailto:losscontrol@everestre.com) for additional information.

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### Sources:

#### **OSHA**

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134>

<https://www.osha.gov/SLTC/respiratoryprotection/>

<https://www.osha.gov/SLTC/covid-19/>

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.134AppD>

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