

Respiratory Protection

As part of the occupational health and safety program, consideration should be given to personnel exposure to harmful airborne particulate materials or vapors including dusts, fogs, fumes, mists, gases, smokes, sprays, and animal allergens. The primary protection should focus on preventing or minimizing atmospheric contamination with engineering control and administrative control measures. If, following appropriate risk assessment, it is decided that personal respiratory protective equipment is needed in addition to available engineering/administrative control measures, the ancillary guidance, as described below, should be considered to assure personal protection when respirators are used.

When personal protective equipment are necessary to protect individuals from contaminant exposure, an institutional program (Respiratory Protection Program or Personal Protective Equipment Program) is required. The Program is a cohesive collection of written worksite-specific procedures and policies that, taken together, address all relevant respiratory protection elements, including guidance for personal protective equipment selection (including appropriate protection factors); evaluation by an occupational health professional of the suitability of the individual to be medically able to wear the respirator and health hazards associated with the use of respiratory protection devices; qualitative and/or quantitative fit testing*; and respirator use training to include inspection, maintenance and care, quality, quantity and flow of breathing air, and routine and emergency use procedures.

When selecting personal protective equipment, it is important to consider that respiratory protection devices are specific to (or appropriate for) the contaminant type. For example, an N95 or FFP1-3 filtering face piece is often used for protection for respirable dust, smoke, and aqueous fog (aerosols), whereas chemical or gas exposures are better mitigated with a Chemical Cartridge/Gas Mask, Powered Air-Purifying Respirator (PAPR), or Self-Contained Breathing Apparatus (SCBA). Note that for air-purifying respirators, knowing the hazard and the amount of hazard in the air is important for selecting the proper filters/cartridges. Additionally, most dust masks or medical (surgical) facemasks do not seal tightly to the face, thus allowing airborne hazards, including animal allergens, to enter the breathing zone; and are not approved as respirators.

* https://www.cdc.gov/niosh/ppe/respirators/fit-testing.html?CDC_AAref_Val=https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/RespSource3fittest.html