

# GET SOME AIR: Using Respirators



The National Institute of Occupational Safety and Health, NIOSH, collaborates with industry partners and other government units to develop respirator standards in accordance with government regulations. Look for the NIOSH code that describes the standard appropriate to your workplace. Respirators reduce worker exposures when engineering control systems, such as ventilation and scrubbing systems, cannot. Employers can require workers to wear respirators to perform some tasks. Approximately five percent of all U.S. workers, in about 20 percent of all work establishments, wear respirators at least some of the time.

### Particulate Respirators

Particulate filters are available in disposable or reusable models with replaceable filters. They cover the nose and mouth and provide protection from airborne particles including dust, mist, liquids and some fumes but not gases or vapors. They are rated by NIOSH according to what and how much they filter out. The ratings have a letter and number.

**N – not oil proof**

**R – oil resistant (up to 8 hours)**

**P – oil proof (beyond 8 hours)**

The numbers refer to the percentage of one-micrometer particles removed during trials. For example, a 95 rating indicates that the filter removes 95% of particles from the air.

### Chemical Cartridge/ Gas Mask Respirators

Chemical Cartridge/Gas Mask Respirators contain replaceable carbon filters that absorb gas and vapor from the air. Reusable masks seal tightly around the edges to block out unfiltered air. Choose from Half-Mask, covering only nose and mouth, or Full-Mask, covering your entire face.

Several types of cartridge are available. These include chemical (blocks out vapors but not particles) and dual cartridge (includes a replaceable pre-filter for particulates).



### Choosing the Right Particulate Respirator

	N95	N99	P95	R95	N100	P100
Filtering Efficiency %	95	99	95	95	99.97	99.97
Oil Resistance	None	None	High	Mod.	None	High
<b>Applications</b>						
Grinding	•	•				
Sanding	•	•				
Bagging	•	•				
Non-Oil Substance Processing	•	•				
Foundaries			•	•		
Lab Settings			•	•		
Agriculture			•	•		
Petrochemical Manufacturing			•	•		
Undercoatings				•		
Welding					•	•
Pharmaceutical Manufacturing					•	•
Processing Minerals					•	
Coal					•	
Non-Oil Based Mists					•	
Lead						•
Cadmium Handling						•

[www.cdc.gov/niosh/nppt/topics/respirators](http://www.cdc.gov/niosh/nppt/topics/respirators)

