

### Cartridge Change-Out Schedule

Respirator filter cartridges will be changed out:

- At the frequency established during the hazard assessment according to the respirator cartridge change-out schedule (see table below), which is based on OSHA's standards and manufacturers' recommendations.
- If the cartridge is damaged.
- If the end-of-service life indicator (if present), is activated.
- If a noticeable change in breathing resistance is observed.
- If chemical warning properties (i.e., smell or taste) are detected.

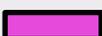
Contaminant	Change-Out Schedule
<b>Organic vapors</b>	Maximum 8 hours of use total (up to 200 ppm)
<b>All cartridges for emergency use</b>	Discard after each use
<b>HEPA filters</b>	Restricted breathing or visibly dirty, wet, or compromised
<b>Filtering facepiece</b>	Visibly dirty or contaminated
<b>Acrylonitrile</b>	End of service life or end of shift
<b>Ammonia</b>	Maximum 8 hours of use total (up to 125 ppm)
<b>Benzene</b>	End of service life or end of shift
<b>Butadiene</b>	Every 1, 2, or 4 hours, depending on concentration (refer to 29 CFR 1910.1051 Table 1), or end of shift
<b>Formaldehyde</b>	3 hours or end of shift (whichever comes first)
<b>HCl, SO<sub>2</sub>, Chlorine</b>	End of service life or end of shift
<b>Methylene Chloride</b>	Must use supplied air
<b>Nitric Acid</b>	Must use supplied air
<b>Vinyl Chloride</b>	End of service life or end of shift

### Questions?

Contact Environmental Health and Safety at [ehs@northwestern.edu](mailto:ehs@northwestern.edu)

### Selecting Respirator Cartridges

Air-purifying cartridges must be matched to the contaminant of concern.  
Cartridges are color-coded to indicate their contaminant of concern.

Color		Contaminant
<b>Black</b>		Organic vapor
<b>White</b>		Acid gas
<b>Yellow</b>		Organic vapor/acid gas
<b>Green</b>		Ammonia/methyl amine
<b>Olive Green</b>		Organic vapor/formaldehyde
<b>Orange</b>		Mercury vapor/chlorine gas
<b>Purple (Magenta)</b>		Dust, fumes, mists, asbestos, radionucleotides, and highly-toxic particulates (P100)
<b>Black/Purple</b>		Organic vapor and P100 combination
<b>White/Purple</b>		Acid gas and P100 combination
<b>Yellow/Purple</b>		Organic vapor/acid gas and P100 combination
<b>Green/Purple</b>		Ammonia/methyl amine and P100 combination
<b>Olive Green/Purple</b>		Organic vapor/formaldehyde and P100 combination
<b>Pre-filters</b>		Use with dusts, fumes, mists, pesticides, and plants

### Questions?

Contact Environmental Health and Safety at [ehs@northwestern.edu](mailto:ehs@northwestern.edu)