

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
Organic vapors	Maximum 8 hours of use total (up to 200 ppm)
All cartridges for emergency use	Discard after each use
HEPA filters	Restricted breathing or visibly dirty, wet, or compromised
Filtering facepiece	Visibly dirty or contaminated
Acrylonitrile	End of service life or end of shift
Ammonia	Maximum 8 hours of use total (up to 125 ppm)
Benzene	End of service life or end of shift
Butadiene	Every 1, 2, or 4 hours, depending on concentration (refer to 29 CFR 1910.1051 Table 1), or end of shift
Formaldehyde	3 hours or end of shift (whichever comes first)
HCl, SO₂, Chlorine	End of service life or end of shift
Methylene Chloride	Must use supplied air
Nitric Acid	Must use supplied air
Vinyl Chloride	End of service life or end of shift

Questions?

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

Questions?

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