

Table VI-1

Respirator Selection Guide
for Indicator Chemicals

Chemical	Recommended Respirator	Comments
Acetone	(F)OV (organic vapor) a	
Acetonitrile	OV (organic vapor)	Poor warning. 3M 3530 Monitor.
Acrylonitrile	OV (organic vapor)	Poor warning. SA if cartridge not disposed of after shift.
Aldicarb	OV/AG/HEPA (organic vapor & acid gas & particulate)	
Aldrin	OV/AG/HEPA (organic vapor & acid gas & particulate)	
Alachlor	NF	
Aluminum	N95 (particulate filter)	
Ammonium hydroxide	(F)AM (ammonia/methylamine)	Irritation also provides warning.
Aroclor 1016	(F)OV/P95 (organic vapor & particulate filter)	
Arsenic	N100	
Atrazine	OV/AG/HEPA (organic vapor & acid gas & particulate)	
Barium	N95 (particulate filter)	
Benzene	OV (organic vapor)	Poor warning. SA if cartridge not disposed of after shift.
Benzonitrile	OV/AG/HEPA (organic vapor & acid gas & particulate)	
Bromoform	(F)OV (organic vapor)	3M 3510 Monitor.
Cadmium	N100	0.002 mg/m3 TLV-TWA for respirable dust.
Calcium cyanide	SA (supplied air respirator)	Poor warning.
Chlorobenzene	OV (organic vapor)	3M 3510 Monitor.
Chromic acid	N95 (particulate filter)	
Chromium	N95 (particulate filter)	
Cobalt	N95 (particulate filter)	
Copper	N95 (particulate filter)	
Cyanamide	N95 (particulate filter)	
Di-n-butyl phthalate	OV/P95 (organic vapor & particulate filter) b	
Diazinon	OV/AG/HEPA (organic vapor & acid gas & particulate)	
Dichlobenil	NF	
Dichloroethane, 1,2- (Ethylene dichloride)	OV (organic vapor)	Poor warning. 3M 3510 Monitor.
Dichloroethene, 1,1- (Vinylidene chloride)	OV (organic vapor)	Poor warning.
Dichloromethane (Methylene chloride)	SA(F) (supplied air respirator) b	OSHA requires SA(F). Short OV service life. 3M 3530 Monitor.
Dichlorophenoxyacetic acid, 2,4- (2,4-D)	OV/AG/HEPA (organic vapor & acid gas & particulate)	
Disulfoton	NF	
Ethanol	OV (organic vapor)	Short OV service life at 10X TLV.
Ethyl benzene	OV (organic vapor) b	3M 3510 Monitor.
Ethyl ether	OV (organic vapor)	Short OV service life. 3M 3530 Monitor.
Fluorene	OV (organic vapor) b	
Formaldehyde	(F)FORM (formaldehyde) b	Irritation also provides warning. 3M 3270 Monitor.
Glyphosate	OV/AG/HEPA (organic vapor & acid gas & particulate)	
Hexane	OV (organic vapor)	3M 3510 Monitor.
Hydrochloric acid	AG (acid gas)	Irritation also provides warning.
Iron	N95 (particulate filter)	
Lead	N100	
Malathion	(F)OV (organic vapor)	
Mercury	Hg;SA;N95 (mercury vapor; supplied air; particulate filter) c	
Methanol	SA (supplied air respirator)	Very short OV service life.
Methyl acetate	OV (organic vapor)	
Methylacrylonitrile	SA (supplied air respirator)	Poor warning.
Molybdenum	N95 (particulate filter)	
Naled	NF	
Naphthalene	OV (organic vapor) b	3M 3510 Monitor.
Nickel	N95 (particulate filter)	
Nitric acid	SA(F) (supplied air)	
Nitrobenzene	OV (organic vapor)	
Paraquat	OV/AG/HEPA (organic vapor & acid gas & particulate) b	
Permethrin	NF	
Phenol	OV/N95 (organic vapor & particulate filter)	
Potassium cyanide	SA (supplied air respirator) b	Poor warning.
Rotenone	OV/AG/HEPA (organic vapor & acid gas & particulate)	

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Selenium	N95 (particulate filter)	
Sodium cyanide	SA (supplied air respirator)	Poor warning.
Sodium hydroxide	N95 (particulate filter)	
Styrene	OV (organic vapor)	
Sulfuric acid	(F)N95 (particulate filter)	
Tetrachloroethene (Perchloroethylene)	(F)OV (organic vapor)	3M 3510 Monitor.
Tetrachloromethane (Carbon tetrachloride)	(F)OV (organic vapor)	Poor warning. 3M 3510 Monitor.
Thallium	N95 (particulate filter)	
Tin	N95; OV/N95 (organic vapor & particulate filter) b,d	
Toluene	OV (organic vapor) b	3M 3510 Monitor.
Toxaphene	OV/AG/HEPA (organic vapor & acid gas & particulate)	
Trichloroethene (Acetylene trichloride)	OV (organic vapor)	3M 3510 Monitor.
Trichlorofluoromethane	SA (supplied air respirator)	Short OV service life.
Trichloromethane (Chloroform)	OV (organic vapor)	Poor warning. 3M 3510 Monitor.
Vinyl chloride	SA (supplied air respirator)	OSHA allows OV for very short use periods.
Xylenes	OV (organic vapor)	3M 3510 Monitor.

a. (F) designates fullface respirator; all others are half facepiece respirators.

b. May exist in both particulate and vapor phase. 3M recommends that a gas/vapor cartridge be used in addition to a particulate filter.

c. Hg for mercury (as Hg) vapor; SA for alkyl compounds; N95 for aryl and inorganic dust; Hg/N95 for volatile liquids.

d. N95 for metal and inorganic compounds except SnH₄; OV/N95 for organic compounds.

NF Not found.

Sources: 3M 2000 Respirator Selection Guide; National Toxicology Program (NTP) Chemical Repository; NIOSH Pocket Guide to Chemical Hazards.