

Appendix 9. List of Hazardous Air Pollutants

1,1,2,2-Tetrachloroethane	Benzene (including benzene from gasoline)
1,1,2-Trichloroethane	Benidine
1,1-Dimethyl hydrazine	Benzotrichloride
1,2,4-Trichlorobenzene	Benzyl chloride
1,2-Dibromo-3-chloropropane	Beryllium Compounds
1,2-Diphenylhydrazine	beta-Propiolactone
1,2-Epoxybutane	Biphenyl
1,2-Propylenimine (2-Methyl aziridine)	Bis(2-ethylhexyl)phthalate (DEHP)
1,3-Butadiene	Bis(chloromethyl)ether
1,3-Dichloropropene	Bromoform
1,3-Propane sultone	Cadmium Compounds
1,4-Dichlorobenzene(p)	Calcium cyanamide
1,4-Dioxane (1,4-Diethyleneoxide)	Captan
2,2,4-Trimethylpentane	Carbaryl
2,3,7,8-Tetrachlorodibenzo-p-dioxin	Carbon disulfide
2,4,5-Trichlorophenol	Carbon tetrachloride
2,4,6-Trichlorophenol	Carbonyl sulfide
2,4-D, salts and esters	Catechol
2,4-Dinitrophenol	Chloramben
2,4-Dinitrotoluene	Chlordane
2,4-Toluene diamine	Chlorine
2,4-Toluene diisocyanate	Chloroacetic acid
2-Acetylaminofluorene	Chlorobenzene
2-Chloroacetophenone	Chlorobenzilate
2-Nitropropane	Chloroform
3,3-Dichlorobenzidene	Chloromethyl methyl ether
3,3-Dimethoxybenzidine	Chloroprene
3,3'-Dimethyl benzidine	Chromium Compounds
4,4'-Methylenedianiline	Cobalt Compounds
4,4-Methylene bis(2-chloroaniline)	Coke Oven Emissions
4,6-Dinitro-o-cresol, and salts	Cresols/Cresylic acid (isomers and mixture)
4-Aminobiphenyl	Cumene
4-Nitrobiphenyl	Cyanide Compounds ¹
4-Nitrophenol	DDE
Acetaldehyde	Diazomethane
Acetamide	Dibenzofurans
Acetonitrile	Dibutylphthalate
Acetophenone	Dichloroethyl ether (Bis(2-chloroethyl)ether)
Acrolein	Dichlorvos
Acrylamide	Diethanolamine
Acrylic acid	Diethyl sulfate
Acrylonitrile	Dimethyl aminoazobenzene
Allyl chloride	Dimethyl carbamoyl chloride
Aniline	Dimethyl formamide
Antimony Compounds	Dimethyl phthalate
Arsenic Compounds (inorganic including arsine)	Dimethyl sulfate
Asbestos	Epichlorohydrin (1-Chloro-2,3-epoxypropane)

Ethyl acrylate	N-Nitrosodimethylamine
Ethyl benzene	N-Nitrosomorpholine
Ethyl carbamate (Urethane)	N-Nitroso-N-methylurea
Ethyl chloride (Chloroethane)	o-Anisidine
Ethylene dibromide (Dibromoethane)	o-Cresol
Ethylene dichloride (1,2-Dichloroethane)	o-Toluidine
Ethylene glycol	o-Xylenes
Ethylene imine (Aziridine)	Parathion
Ethylene oxide	p-Cresol
Ethylene thiourea	Pentachloronitrobenzene (Quintobenzene)
Ethylidene dichloride (1,1-Dichloroethane)	Pentachlorophenol
Fine mineral fibers ³	Phenol
Formaldehyde	Phosgene
Glycol ethers ²	Phosphine
Heptachlor	Phosphorus
Hexachlorobenzene	Phthalic anhydride
Hexachlorobutadiene	Polychlorinated biphenyls (Aroclors)
Hexachlorocyclopentadiene	Polycyclic Organic Matter ⁴
Hexachloroethane	p-Phenylenediamine
Hexamethylene-1,6-diisocyanate	Propionaldehyde
Hexamethylphosphoramide	Propoxur (Baygon)
Hexane	Propylene dichloride (1,2-Dichloropropane)
Hydrazine	Propylene oxide
Hydrochloric acid	p-Xylenes
Hydrogen fluoride (Hydrofluoric acid)	Quinoline
Hydroquinone	Quinone
Isophorone	Radionuclides (including radon) ⁵
Lead Compounds	Selenium Compounds
Lindane (all isomers)	Styrene
Maleic anhydride	Styrene oxide
Manganese Compounds	Tetrachloroethylene (Perchloroethylene)
m-Cresol	Titanium tetrachloride
Mercury Compounds	Toluene
Methanol	Toxaphene (chlorinated camphene)
Methoxychlor	Trichloroethylene
Methyl bromide (Bromomethane)	Triethylamine
Methyl chloride (Chloromethane)	Trifluralin
Methyl chloroform (1,1,1-Trichloroethane)	Vinyl acetate
Methyl hydrazine	Vinyl bromide
Methyl iodide (Iodomethane)	Vinyl chloride
Methyl isobutyl ketone (Hexone)	Vinylidene chloride (1,1-Dichloroethylene)
Methyl isocyanate	Xylenes (isomers and mixture)
Methyl methacrylate	
Methyl tert butyl ether	
Methylene chloride (Dichloromethane)	
Methylene diphenyl diisocyanate (MDI)	
m-Xylenes	
N,N-Diethyl aniline (N,N-Dimethylaniline)	
Naphthalene	
Nickel Compounds	
Nitrobenzene	

NOTE: For all listings above which contain the word “compounds” and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical’s infrastructure.

1-5. For more information, see:
<https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications>.

1. X'CN where X = H' or any other group where a formal dissociation may occur. For example, KCN or Ca(CN)₂
2. Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH₂CH₂)_n-OR' where n = 1, 2, or 3
R = alkyl or aryl groups
R' = R, H, or groups which, when removed, yield glycol ethers with the structure: R-(OCH₂CH)_n-OH.
Polymers are excluded from the glycol category. (See Modification)
3. Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.
4. Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100 °C.
5. A type of atom which spontaneously undergoes radioactive decay.