

Substances Listed in the Thirteenth Report on Carcinogens

Bold entries indicate new or changed listings in the Thirteenth Report on Carcinogens.

Known To Be Human Carcinogens

Aflatoxins
Alcoholic Beverage Consumption
4-Aminobiphenyl
Analgesic Mixtures Containing Phenacetin (see Phenacetin and Analgesic Mixtures Containing Phenacetin)
Aristolochic Acids
Arsenic and Inorganic Arsenic Compounds
Asbestos
Azathioprine
Benzene
Benzidine (see Benzidine and Dyes Metabolized to Benzidine)
Beryllium and Beryllium Compounds
Bis(chloromethyl) Ether and Technical-Grade Chloromethyl Methyl Ether
1,3-Butadiene
1,4-Butanediol Dimethanesulfonate
Cadmium and Cadmium Compounds
Chlorambucil
1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea (see Nitrosourea Chemotherapeutic Agents)
Chromium Hexavalent Compounds
Coal Tars and Coal-Tar Pitches
Coke-Oven Emissions
Cyclophosphamide
Cyclosporin A
Diethylstilbestrol
Dyes Metabolized to Benzidine (Benzidine Dye Class) (see Benzidine and Dyes Metabolized to Benzidine)
Erionite
Estrogens, Steroidal
Ethylene Oxide
Formaldehyde
Hepatitis B Virus
Hepatitis C Virus
Human Papillomaviruses: Some Genital-Mucosal Types
Melphalan
Methoxsalen with Ultraviolet A Therapy
Mineral Oils: Untreated and Mildly Treated
Mustard Gas
2-Naphthylamine
Neutrons (see Ionizing Radiation)
Nickel Compounds (see Nickel Compounds and Metallic Nickel)
Radon (see Ionizing Radiation)
Silica, Crystalline (Respirable Size)
Solar Radiation (see Ultraviolet Radiation Related Exposures)
Soots
Strong Inorganic Acid Mists Containing Sulfuric Acid
Sunlamps or Sunbeds, Exposure to (see Ultraviolet Radiation Related Exposures)
Tamoxifen
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin
Thiotepa
Thorium Dioxide (see Ionizing Radiation)

Tobacco Smoke, Environmental (see Tobacco-Related Exposures)

Tobacco Smoking (see Tobacco-Related Exposures)

Tobacco, Smokeless (see Tobacco-Related Exposures)

o-Toluidine

Ultraviolet Radiation, Broad-Spectrum (see Ultraviolet Radiation Related Exposures)

Vinyl Chloride (see Vinyl Halides [selected])

Wood Dust

X-Radiation and Gamma Radiation (see Ionizing Radiation)

Reasonably Anticipated To Be Human Carcinogens

Acetaldehyde

2-Acetylaminofluorene

Acrylamide

Acrylonitrile

Adriamycin

2-Aminoanthraquinone

o-Aminoazotoluene

1-Amino-2,4-dibromoanthraquinone

2-Amino-3,4-dimethylimidazo[4,5-f]quinoline (see Heterocyclic Amines [Selected])

2-Amino-3,8-dimethylimidazo[4,5-f]quinoxaline (see Heterocyclic Amines [Selected])

1-Amino-2-methylanthraquinone

2-Amino-3-methylimidazo[4,5-f]quinoline (see Heterocyclic Amines [Selected])

2-Amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (see Heterocyclic Amines [Selected])

Amitrole

o-Anisidine and Its Hydrochloride

Azacitidine

Basic Red 9 Monohydrochloride

Benz[a]anthracene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)

Benzo[b]fluoranthene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)

Benzo[j]fluoranthene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)

Benzo[k]fluoranthene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)

Benzo[a]pyrene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)

Benzotrichloride

2,2-Bis(bromomethyl)-1,3-propanediol (Technical Grade)

Bis(chloroethyl) Nitrosourea (see Nitrosourea Chemotherapeutic Agents)

Bromodichloromethane

1-Bromopropane

Butylated Hydroxyanisole

Captafol

Carbon Tetrachloride

Ceramic Fibers (Respirable Size)

Chloramphenicol

Chlorendic Acid

Chlorinated Paraffins (C₁₂, 60% Chlorine)

Chloroform

1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (see Nitrosourea Chemotherapeutic Agents)

3-Chloro-2-methylpropene

4-Chloro-o-phenylenediamine

Chloroprene

p-Chloro-o-toluidine and Its Hydrochloride

Chlorozotocin (see Nitrosourea Chemotherapeutic Agents)

Cisplatin

Cobalt Sulfate

Cobalt–Tungsten Carbide: Powders and Hard Metals
p-Cresidine
Cumene
 Cupferron
 Dacarbazine
 Danthron
 2,4-Diaminoanisole Sulfate
 2,4-Diaminotoluene
 Diazoaminobenzene
 Dibenz[*a,h*]acridine (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
 Dibenz[*a,i*]acridine (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
 Dibenz[*a,h*]anthracene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
 7H-Dibenzo[*c,g*]carbazole (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
 Dibenzo[*a,e*]pyrene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
 Dibenzo[*a,h*]pyrene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
 Dibenzo[*a,i*]pyrene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
 Dibenzo[*a,l*]pyrene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
 1,2-Dibromo-3-chloropropane
 1,2-Dibromoethane
 2,3-Dibromo-1-propanol
 1,4-Dichlorobenzene
 3,3'-Dichlorobenzidine and Its Dihydrochloride
 Dichlorodiphenyltrichloroethane
 1,2-Dichloroethane
 Dichloromethane
 1,3-Dichloropropene (Technical Grade)
 Diepoxybutane
 Diesel Exhaust Particulates
 Di(2-ethylhexyl) Phthalate
 Diethyl Sulfate
 Diglycidyl Resorcinol Ether
 3,3'-Dimethoxybenzidine (see 3,3'-Dimethoxybenzidine and Dyes Metabolized to 3,3'-Dimethoxybenzidine)
 4-Dimethylaminoazobenzene
 3,3'-Dimethylbenzidine (see 3,3'-Dimethylbenzidine and Dyes Metabolized to 3,3'-Dimethylbenzidine)
 Dimethylcarbamoyl Chloride
 1,1-Dimethylhydrazine
 Dimethyl Sulfate
 Dimethylvinyl Chloride
 1,6-Dinitropyrene (see Nitroarenes [Selected])
 1,8-Dinitropyrene (see Nitroarenes [Selected])
 1,4-Dioxane
 Disperse Blue 1
 Dyes Metabolized to 3,3'-Dimethoxybenzidine (3,3'-Dimethoxybenzidine Dye Class)
 (see 3,3'-Dimethoxybenzidine and Dyes Metabolized to 3,3'-Dimethoxybenzidine)
 Dyes Metabolized to 3,3'-Dimethylbenzidine (3,3'-Dimethylbenzidine Dye Class)
 (see 3,3'-Dimethylbenzidine and Dyes Metabolized to 3,3'-Dimethylbenzidine)
 Epichlorohydrin
 Ethylene Thiourea
 Ethyl Methanesulfonate
 Furan
 Glass Wool Fibers (Inhalable), Certain
 Glycidol
 Hexachlorobenzene

Hexachloroethane
Hexamethylphosphoramide
Hydrazine and Hydrazine Sulfate
Hydrazobenzene
Indeno[1,2,3-*cd*]pyrene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
Iron Dextran Complex
Isoprene
Kepone
Lead and Lead Compounds
Lindane, Hexachlorocyclohexane (Technical Grade), and Other Hexachlorocyclohexane Isomers
2-Methylaziridine
5-Methylchrysene (see Polycyclic Aromatic Hydrocarbons: 15 Listings)
4,4'-Methylenebis(2-chloroaniline)
4,4'-Methylenebis(*N,N*-dimethyl)benzenamine
4,4'-Methylenedianiline and Its Dihydrochloride
Methyleugenol
Methyl Methanesulfonate
N-Methyl-*N'*-Nitro-*N*-Nitrosoguanidine (see *N*-Nitrosamines: 15 Listings)
Metronidazole
Michler's Ketone
Mirex
Naphthalene
Nickel, Metallic (see Nickel Compounds and Metallic Nickel)
Nitrilotriacetic Acid
o-Nitroanisole
Nitrobenzene
6-Nitrochrysene (see Nitroarenes [Selected])
Nitrofen
Nitrogen Mustard Hydrochloride
Nitromethane
2-Nitropropane
1-Nitropyrene (see Nitroarenes [Selected])
4-Nitropyrene (see Nitroarenes [Selected])
N-Nitrosodi-*n*-butylamine (see *N*-Nitrosamines: 15 Listings)
N-Nitrosodiethanolamine (see *N*-Nitrosamines: 15 Listings)
N-Nitrosodiethylamine (see *N*-Nitrosamines: 15 Listings)
N-Nitrosodimethylamine (see *N*-Nitrosamines: 15 Listings)
N-Nitrosodi-*n*-propylamine (see *N*-Nitrosamines: 15 Listings)
N-Nitroso-*N*-ethylurea (see *N*-Nitrosamines: 15 Listings)
4-(*N*-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone (see *N*-Nitrosamines: 15 Listings)
N-Nitroso-*N*-methylurea (see *N*-Nitrosamines: 15 Listings)
N-Nitrosomethylvinylamine (see *N*-Nitrosamines: 15 Listings)
N-Nitrosomorpholine (see *N*-Nitrosamines: 15 Listings)
N-Nitrosornicotine (see *N*-Nitrosamines: 15 Listings)
N-Nitrosopiperidine (see *N*-Nitrosamines: 15 Listings)
N-Nitrosopyrrolidine (see *N*-Nitrosamines: 15 Listings)
N-Nitrososarcosine (see *N*-Nitrosamines: 15 Listings)
o-Nitrotoluene
Norethisterone
Ochratoxin A
4,4'-Oxydianiline
Oxymetholone

Pentachlorophenol and By-products of Its Synthesis

Phenacetin (see Phenacetin and Analgesic Mixtures Containing Phenacetin)
Phenazopyridine Hydrochloride
Phenolphthalein
Phenoxybenzamine Hydrochloride
Phenytoin and Phenytoin Sodium
Polybrominated Biphenyls
Polychlorinated Biphenyls
Procarbazine and Its Hydrochloride
Progesterone
1,3-Propane Sultone
 β -Propiolactone
Propylene Oxide
Propylthiouracil
Reserpine
Riddelliine
Safrole
Selenium Sulfide
Streptozotocin (see Nitrosourea Chemotherapeutic Agents)
Styrene
Styrene-7,8-oxide
Sulfallate
Tetrachloroethylene
Tetrafluoroethylene
Tetranitromethane
Thioacetamide
4,4'-Thiodianiline
Thiourea
Toluene Diisocyanates
Toxaphene
Trichloroethylene
2,4,6-Trichlorophenol
1,2,3-Trichloropropane
Tris(2,3-dibromopropyl) Phosphate
Ultraviolet Radiation A (see Ultraviolet Radiation Related Exposures)
Ultraviolet Radiation B (see Ultraviolet Radiation Related Exposures)
Ultraviolet Radiation C (see Ultraviolet Radiation Related Exposures)
Urethane
Vinyl Bromide (see Vinyl Halides [Selected])
4-Vinyl-1-cyclohexene Diepoxide
Vinyl Fluoride (see Vinyl Halides [Selected])