



Immediately Dangerous To Life or Health (IDLH) Values

Table of IDLH Values

Since the development of the original IDLH values in the 1970s and their [subsequent revision in 1994 \(NIOSH Documentation for Immediately Dangerous to Life or Health Concentrations \(IDLH\) \(1994\)\)](#) . NIOSH has continued to review relevant scientific data and conduct research on methods for developing IDLH values. This has led to the development of [Current Intelligence Bulletin \(CIB\) 66: Derivation of Immediately Dangerous to Life or Health \(IDLH\) \[NIOSH 2014-100\]](#).

It is the goal of NIOSH to re-evaluate all IDLH values included in the list below using the guidelines and criteria included in CIB 66. Until this occurs, this list contains IDLH values based on both the [1994 revised criteria](#) and CIB 66 [NIOSH 2014-100]. It is important to note which criteria was applied to develop a specific IDLH value. When a chemical entry contains more than one IDLH value, the IDLH value based on CIB 66 should be treated as current NIOSH policy.

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Acetaldehyde	75-07-0	2,000 ppm	
Acetic acid	64-19-7	50 ppm	
Acetic anhydride	108-24-7	200 ppm	
Acetone	67-64-1	2,500 ppm	
Acetonitrile	75-05-8	500 ppm	137 ppm (NIOSH Pub. No. 2017-203)
Acetylene tetrabromide	79-27-6	8 ppm	
Acrolein	107-02-8	2 ppm	
Acrylamide	79-06-1	60 mg/m ³	
Acrylonitrile	107-13-1	85 ppm	60 ppm (NIOSH Pub. No. 2016-167)
Aldrin	309-00-2	25 mg/m ³	
Allyl alcohol	107-18-6	20 ppm	
Allyl chloride	107-05-1	250 ppm	
Allyl glycidyl ether	106-92-3	50 ppm	
2 Aminopyridine	504-29-0	5 ppm	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Ammonia	7664-41-7	300 ppm	
Ammonium sulfamate	7773-06-0	1,500 mg/m ³	
n-Amyl acetate	628-63-7	1,000 ppm	
sec-Amyl acetate	626-38-0	1,000 ppm	
Aniline	62-53-3	100 ppm	
o-Anisidine	90-04-0	50 mg/m ³	
p-Anisidine	104-94-9	50 mg/m ³	
Antimony compounds (as Sb)	7440-36-0	50 mg Sb/m ³	
ANTU	86-88-4	100 mg/m ³	
Arsenic (inorganic compounds, as As)	7440-38-2 (metal)	5 mg As/m ³	
Arsine	7784-42-1	3 ppm	
Azinphosmethyl	86-50-0	10 mg/m ³	
Barium (soluble compounds, as Ba)	7440-39-3	50 mg Ba/m ³	
Benzene	71-43-2	500 ppm	
Benzonitrile			14 ppm (66 mg/m ³) (NIOSH Pub. No. 2017-104)
Benzoyl peroxide	94-36-0	1,500 mg/m ³	
Benzyl chloride	100-44-7	10 ppm	
Beryllium compounds (as Be)	7440-41-7 (metal)	4 mg Be/m ³	
Boron oxide	1303-86-2	2,000 mg/m ³	
Boron trifluoride	7637-07-2	25 ppm	
Bromine	7726-95-6	3 ppm	
Bromine Pentafluoride			1.7 ppm (NIOSH Pub. No. 2017-106)
Bromine trifluoride	7787-71-5		12 ppm (67 mg/m ³) (NIOSH Pub. No. 2020-123)
Bromoform	75-25-2	850 ppm	
Butane	106-97-8		1,600 ppm (>10% LEL) (NIOSH Pub. No. 2016-174)

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
1,3-Butadiene	106-99-0	2,000 ppm	2,000 ppm (10% LEL) (NIOSH Pub. No. 2017-107)
2-Butanone	78-93-3	3,000 ppm	
2-Butoxyethanol	111-76-2	700 ppm	
n-Butyl acetate	123-86-4	1,700 ppm	
sec-Butyl acetate	105-46-4	1,700 ppm	
tert-Butyl acetate	540-88-5	1,500 ppm	
n-Butyl alcohol	71-36-3	1,400 ppm	
sec-Butyl alcohol	78-92-2	2,000 ppm	
tert-Butyl alcohol	75-65-0	1,600 ppm	
n-Butylamine	109-73-9	300 ppm	
tert-Butyl chromate	1189-85-1	15 mg Cr(VI)/m ³	
n-Butyl Acrylate	141-32-2		113 ppm (NIOSH Pub. No. 2016-173)
n-Butyl glycidyl ether	2426-08-6	250 ppm	
n-Butyl mercaptan	109-79-5	500 ppm	
p-tert-Butyltoluene	98-51-1	100 ppm	
Cadmium dust (as Cd)	7440-43-9 (metal)	9 mg Cd/m ³	
Cadmium fume (as Cd)	1306-19-0 (CdO)	9 mg Cd/m ³ [Unc h]	
Calcium arsenate (as As)	7778-44-1	5 mg As/m ³	
Calcium oxide	1305-78-8	25 mg/m ³	
Camphor (synthetic)	76-22-2	200 mg/m ³	
Carbaryl	63-25-2	100 mg/m ³	
Carbon black	1333-86-4	1,750 mg/m ³	
Carbon dioxide	124-38-9	40,000 ppm	
Carbon disulfide	75-15-0	500 ppm	
Carbon monoxide	630-08-0	1,200 ppm	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Carbon tetrachloride	56-23-5	200 ppm	
Chlordane	57-74-9	100 mg/m³	
Chlorinated camphene	8001-35-2	200 mg/m³	
Chlorinated diphenyl oxide	n/a	5 mg/m³	
Chlorine	7782-50-5	10 ppm	
Chlorine dioxide	10049-04-4	5 ppm	
Chlorine Pentafluoride	13637-63-3		1.7 ppm (NIOSH Pub. No. 2016-170)
Chlorine Trifluoride	7790-91-2		12 ppm (45 mg/m3) (NIOSH Pub. No. 2020-124)
Chloroacetaldehyde	107-20-0	45 ppm	
Chloroacetonitrile	107-14-2		14 ppm (NIOSH Pub. No. 2017-201)
alpha-Chloroacetophenone	532-27-4	15 mg/m³	
Chlorobenzene	108-90-7	1,000 ppm	
o-Chlorobenzylidene malononitrile	2698-41-1	2 mg/m³	
Chlorobromomethane	74-97-5	2,000 ppm	
Chlorodiphenyl (42% chlorine)	53469-21-9	5 mg/m³	
Chlorodiphenyl (54% chlorine)	11097-69-1	5 mg/m³	
Chloroform	67-66-3	500 ppm	
1-Chloro-1-nitropropane	600-25-9	100 ppm	
Chloroacetyl Chloride	79-04-9		1.3 ppm (6 mg/m³)(NIOSH Pub. No. 2016-169)
Chloropicrin	76-06-2	2 ppm	
beta-Chloroprene	126-99-8	300 ppm	
Chromic acid and chromates	1333-82-0 (CrO3)	15 mg Cr(VI)/m³	
Chromium (II) compounds [as Cr(II)]	n/a	250 mg Cr(II)/m³	
Chromium (III) compounds [as Cr(III)]	n/a	25 mg Cr(III)/m³	
Chromium metal (as Cr)	7440-47-3	250 mg Cr/m³	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Coal tar pitch volatiles	65996-93-2	80 mg/m ³	
Cobalt metal, dust and fume (as Co)	7440-48-4	20 mg Co/m ³	
Copper (dusts and mists, as Cu)	7440-50-8	100 mg Cu/m ³	
Copper fume (as Cu)	1317-38-0 (CuO)	100 mg Cu/m ³	
Cotton dust (raw)	n/a	100 mg/m ³	
Crag (r) herbicide	136-78-7	500 mg/m ³	
Cresol (o, m, p isomers)	95-48-7	250 ppm	
Crotonaldehyde	4170-30-3	50 ppm	
Cumene	98-82-8	900 ppm [10% LEL]	
Cyanides (as CN)	n/a	25 mg/m ³ (as CN)	
Cyclohexane	110-82-7	1,300 ppm [10% LEL]	
Cyclohexanol	108-93-0	400 ppm	
Cyclohexanone	108-94-1	700 ppm	
Cyclohexene	110-83-8	2,000 ppm	
Cyclopentadiene	542-92-7	750 ppm	
2,4-D	94-75-7	100 mg/m ³	
DDT	50-29-3	500 mg/m ³	
Decaborane	17702-41-9	15 mg/m ³	
Demeton	8065-48-3	10 mg/m ³	
Diacetone alcohol	123-42-2	1,800 ppm [10% LEL]	
Diazomethane	334-88-3	2 ppm	
Diborane	19287-45-7	15 ppm	
Dibutyl phosphate	107-66-4	30 ppm	
Dibutyl phthalate	84-74-2	4,000 mg/m ³	
o-Dichlorobenzene	95-50-1	200 ppm	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
p-Dichlorobenzene	106-46-7	150 ppm	
Dichlorodifluoromethane	75-71-8	15,000 ppm	
1,3-Dichloro 5,5-dimethylhydantoin	118-52-5	5 mg/m³	
1,1-Dichloroethane	75-34-3	3,000 ppm	
1,2-Dichloroethylene	540-59-0	1,000 ppm	
Dichloroethyl ether	111-44-4	100 ppm	
Dichloromonofluoromethane	75-43-4	5,000 ppm	
1,1-Dichloro-1-Fluoroethane (HCFC-141b)	1717-00-6		1,700 ppm (8,245 mg/m³) (NIOSH Pub. No. 2016-168)
1,1-Dichloro 1-nitroethane	594-72-9	25 ppm	
Dichlorotetrafluoroethane	76-14-2	15,000 ppm	
Dichlorvos	62-73-7	100 mg/m³	
Dieldrin	60-57-1	50 mg/m³	
Diethylamine	109-89-7	200 ppm	
2-Diethylaminoethanol	100-37-8	100 ppm	
Difluorodibromomethane	75-61-6	2,000 ppm	
Diglycidyl ether	2238-07-5	10 ppm	
Diisobutyl ketone	108-83-8	500 ppm	
Diisopropylamine	108-18-9	200 ppm	
Diketene			7.6 ppm(NIOSH Pub. No. 2017-108)
Dimethyl acetamide	127-19-5	300 ppm	
Dimethylamine	124-40-3	500 ppm	
N,N-Dimethylaniline	121-69-7	100 ppm	
Dimethyl 1,2-dibromo 2,2-dichlorethyl phosphate	300-76-5	200 mg/m³	
Dimethylformamide	68-12-2	500 ppm	
1,1-Dimethylhydrazine	57-14-7	15 ppm	
Dimethylphthalate	131-11-3	2,000 mg/m³	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Dimethyl sulfate	77-78-1	7 ppm	
Dinitrobenzene (o, m, p isomers)	528-29-0	50 mg/m ³	
Dinitroocresol	534-52-1	5 mg/m ³	
Dinitrotoluene	25321-14-6	50 mg/m ³	
Di sec-octyl phthalate	117-81-7	5,000 mg/m ³	
Dioxane	123-91-1	500 ppm	
Diphenyl	92-52-4	100 mg/m ³	
Dipropylene glycol methyl ether	34590-94-8	600 ppm	
Endrin	72-20-8	2 mg/m ³	
Epichlorohydrin	106-89-8	75 ppm	
EPN	2104-64-5	5 mg/m ³	
Ethanolamine	141-43-5	30 ppm	
2-Ethoxyethanol	110-80-5	500 ppm	
2-Ethoxyethyl acetate	111-15-9	500 ppm	
Ethyl acetate	141-78-6	2,000 ppm [10% LEL]	
Ethyl acrylate	140-88-5	300 ppm	
Ethyl alcohol	64-17-5	3,300 ppm [10% LEL]	
Ethylamine	75-04-7	600 ppm	
Ethyl benzene	100-41-4	800 ppm [10% LEL]	
Ethyl bromide	74-96-4	2,000 ppm	
Ethyl butyl ketone	106-35-4	1,000 ppm	
Ethyl chloride	75-00-3	3,800 ppm [10% LEL]	
Ethylene chlorohydrin	107-07-3	7 ppm	
Ethylenediamine	107-15-3	1,000 ppm	
Ethylene Dibromide	106-93-4		46 ppm (354 mg/m3) (NIOSH Pub. No. 2020-125)

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Ethylene dichloride	107-06-2	50 ppm	
Ethylene glycol dinitrate	628-96-6	75 mg/m³	
Ethyleneimine	151-56-4	100 ppm	
Ethylene oxide	75-21-8	800 ppm	
Ethyl ether	60-29-7	1,900 ppm [10% LEL]	
Ethyl formate	109-94-4	1,500 ppm	
Ethyl mercaptan	75-08-1	500 ppm	
N-Ethylmorpholine	100-74-3	100 ppm	
Ethyl silicate	78-10-4	700 ppm	
Ferbam	14484-64-1	800 mg/m³	
Ferrovandium dust	12604-58-9	500 mg/m³	
Fluorides (as F)	n/a	250 mg F/m³	
Fluorine	7782-41-4	25 ppm	
Fluorotrichloromethane	75-69-4	2,000 ppm	
Formaldehyde	50-00-0	20 ppm	
Formic acid	64-18-6	30 ppm	
Furan	110-00-9		13 ppm (35.1 mg/m³) (NIOSH Pub. No. 2016-171)
Furfural	98-01-1	100 ppm	
Furfuryl alcohol	98-00-0	75 ppm	
Glycidol	556-52-5	150 ppm	
Graphite (natural)	7782-42-5	1,250 mg/m³	
Hafnium compounds (as Hf)	7440-58-6	50 mg Hf/m³	
Heptachlor	76-44-8	35 mg/m³	
n-Heptane	142-82-5	750 ppm	
Hexachloroethane	67-72-1	300 ppm	
Hexachloronaphthalene	1335-87-1	2 mg/m³	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Hexafluoroactone	684-16-2		9 ppm (61 mg/m ³) (NIOSH Pub. No. 2016-172)
n-Hexane	110-54-3	1,100 ppm [10% LEL]	
2-Hexanone	591-78-6	1,600 ppm	
Hexone	108-10-1	500 ppm	
sec Hexyl acetate	108-84-9	500 ppm	
Hydrazine	302-01-2	50 ppm	
Hydrogen bromide	10035-10-6	30 ppm	
Hydrogen chloride	7647-01-0	50 ppm	
Hydrogen cyanide	74-90-8	50 ppm	
Hydrogen fluoride (as F)	7664-39-3	30 ppm	
Hydrogen peroxide	7722-84-1	75 ppm	
Hydrogen selenide (as Se)	7783-07-5	1 ppm	
Hydrogen sulfide	7783-06-4	100 ppm	
Hydroquinone	123-31-9	50 mg/m ³	
Iodine	7553-56-2	2 ppm	
Iron oxide dust and fume (as Fe)	1309-37-1	2,500 mg Fe/m ³	
Iron Pentacarbonyl	13463-40-6		0.4 ppm (NIOSH Pub. No. 2016-166)
Isoamyl acetate	123-92-2	1,000 ppm	
Isoamyl alcohol (primary and secondary)	123-51-3	500 ppm	
Isobutyl acetate	110-19-0	1,300 ppm [10% LEL]	
Isobutyl alcohol	78-83-1	1,600 ppm	
Isophorone	78-59-1	200 ppm	
Isopropyl acetate	108-21-4	1,800 ppm	
Isopropyl alcohol	67-63-0	2,000 ppm [10% LEL]	
Isopropylamine	75-31-0	750 ppm	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Isopropyl ether	108-20-3	1,400 ppm [10% LEL]	
Isopropyl glycidyl ether	4016-14-2	400 ppm	
Ketene	463-51-4	5 ppm	
Lead compounds (as Pb)	7439-92-1	100 mg Pb/m ³	
Lindane	58-89-9	50 mg/m ³	
Lithium hydride	7580-67-8	0.5 mg/m ³	
L.P.G.	68476-85-7	2,000 ppm [10% LEL]	
Magnesium oxide fume	1309-48-4	750 mg/m ³	
Malathion	121-75-5	250 mg/m ³	
Maleic anhydride	108-31-6	10 mg/m ³	
Manganese compounds (as Mn)	7439-96-5 (metal)	500 mg Mn/m ³	
Mercury compounds [except (organo) alkyls, as Hg]	7439-97-6 (metal)	10 mg Hg/m ³	
Mercury (organo) alkyl compounds(as Hg)	n/a	2 mg Hg/m ³	
Mesityl oxide	141-79-7	1,400 ppm [10% LEL]	
Methacrylonitrile	126-98-7		4.0 ppm (NIOSH Pub. No. 2017-204)
Methoxychlor	72-43-5	5,000 mg/m ³	
Methyl acetate	79-20-9	3,100 ppm [10% LEL]	
Methyl acetylene	74-99-7	1,700 ppm [10% LEL]	
Methyl acetylenepropadiene mixture	59355-75-8	3,400 ppm [10% LEL]	
Methyl acrylate	96-33-3	250 ppm	
Methylal	109-87-5	2,200 ppm [10% LEL]	
Methyl alcohol	67-56-1	6,000 ppm	
Methylamine	74-89-5	100 ppm	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Methyl (namyl) ketone	110-43-0	800 ppm	
Methyl bromide	74-83-9	250 ppm	
Methyl Cellosolve (r)	109-86-4	200 ppm	
Methyl Cellosolve (r) acetate	110-49-6	200 ppm	
Methyl chloride	74-87-3	2,000 ppm	
Methyl chloroform	71-55-6	700 ppm	
Methylcyclohexane	108-87-2	1,200 ppm [10% LEL]	
Methylcyclohexanol	25639-42-3	500 ppm	
o-Methylcyclohexanone	583-60-8	600 ppm	
Methylene bisphenyl isocyanate	101-68-8	75 mg/m ³	
Methylene chloride	75-09-2	2,300 ppm	
Methyl formate	107-31-3	4,500 ppm	
5-Methyl 3-heptanone	541-85-5	100 ppm	
Methyl hydrazine	60-34-4	20 ppm	
Methyl iodide	74-88-4	100 ppm	
Methyl isobutyl carbinol	108-11-2	400 ppm	
Methyl isocyanate	624-83-9	3 ppm	0.12 ppm (0.28 mg/m3) (NIOSH Pub. No. 2017-105)
Methyl mercaptan	74-93-1	150 ppm	
Methyl methacrylate	80-62-6	1,000 ppm	
Methyl styrene	98-83-9	700 ppm	
Mica	12001-26-2	1,500 mg/m ³	
Molybdenum (insoluble compounds, as Mo)	n/a	5,000 mg Mo/m ³	
Molybdenum (soluble compounds, as Mo)	n/a	1,000 mg Mo/m ³	
Monomethyl aniline	100-61-8	100 ppm	
Morpholine	110-91-8	1,400 ppm [10% LEL]	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Naphtha (coal tar)	8030-30-6	1,000 ppm [10% LEL]	
Naphthalene	91-20-3	250 ppm	
Nickel carbonyl (as Ni)	13463-39-3	2 ppm	
Nickel metal and other compounds (as Ni)	7440-02-0 (Metal)	10 mg Ni/m ³	
Nicotine	54-11-5	5 mg/m ³	
Nitric acid	7697-37-2	25 ppm	
Nitric oxide	10102-43-9	100 ppm	
p-Nitroaniline	100-01-6	300 mg/m ³	
Nitrobenzene	98-95-3	200 ppm	
p-Nitrochlorobenzene	100-00-5	100 mg/m ³	
Nitroethane	79-24-3	1,000 ppm	
Nitrogen dioxide	10102-44-0	20 ppm	13 ppm (NIOSH Pub. No. 2017-202)
Nitrogen trifluoride	7783-54-2	1,000 ppm	
Nitroglycerine	55-63-0	75 mg/m ³	
Nitromethane	75-52-5	750 ppm	
1-Nitropropane	108-03-2	1,000 ppm	
2-Nitropropane	79-46-9	100 ppm	
Nitrotoluene (o, m, p isomers)	88-72-2	200 ppm	
Octachloronaphthalene	2234-13-1	Unknown	
Octane	111-65-9	1,000 ppm [10% LEL]	
Oil mist (mineral)	8012-95-1	2,500 mg/m ³	
Osmium tetroxide (as Os)	20816-12-0	1 mg Os/m ³	
Oxalic acid	144-62-7	500 mg/m ³	
Oxygen difluoride	7783-41-7	0.5 ppm	
Ozone	10028-15-6	5 ppm	
Paraquat	1910-42-5	1 mg/m ³	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Parathion	56-38-2	10 mg/m ³	
Pentaborane	19624-22-7	1 ppm	
Pentachloronaphthalene	1321-64-8	Unknown	
Pentachlorophenol	87-86-5	2.5 mg/m ³	
n-Pentane	109-66-0	1,500 ppm [10% LEL]	
2-Pentanone	107-87-9	1,500 ppm	
Perchloromethyl mercaptan	594-42-3	10 ppm	
Perchloryl fluoride	7616-94-6	100 ppm	
Petroleum distillates (naphtha)	8002-05-9	1,100 ppm [10% LEL]	
Phenol	108-95-2	250 ppm	
p-Phenylene diamine	106-50-3	25 mg/m ³	
Phenyl ether (vapor)	101-84-8	100 ppm	
Phenyl etherbiphenyl mixture (vapor)	8004-13-5	10 ppm	
Phenyl glycidyl ether	122-60-1	100 ppm	
Phenylhydrazine	100-63-0	15 ppm	
Phosdrin	7786-34-7	4 ppm	
Phosgene	75-44-5	2 ppm	
Phosphine	7803-51-2	50 ppm	
Phosphoric acid	7664-38-2	1,000 mg/m ³	
Phosphorus (yellow)	7723-14-0	5 mg/m ³	
Phosphorus pentachloride	10026-13-8	70 mg/m ³	
Phosphorus pentasulfide	1314-80-3	250 mg/m ³	
Phosphorus trichloride	7719-12-2	25 ppm	
Phthalic anhydride	85-44-9	60 mg/m ³	
Picric acid	88-89-1	75 mg/m ³	
Pindone	83-26-1	100 mg/m ³	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Platinum (soluble salts, as Pt)	n/a	4 mg Pt/m ³	
Portland cement	65997-15-1	5,000 mg/m ³	
Propane	74-98-6	2,100 ppm [10% LEL]	
n-Propyl acetate	109-60-4	1,700 ppm	
n-Propyl alcohol	71-23-8	800 ppm	
Propylene dichloride	78-87-5	400 ppm	
Propylene imine	75-55-8	100 ppm	
Propylene oxide	75-56-9	400 ppm	
n-Propyl nitrate	627-13-4	500 ppm	
Pyrethrum	8003-34-7	5,000 mg/m ³	
Pyridine	110-86-1	1,000 ppm	
Quinone	106-51-4	100 mg/m ³	
Rhodium (metal fume and insoluble compounds, as Rh)	7440-16-6 (metal)	100 mg Rh/m ³	
Rhodium (soluble compounds, as Rh)	n/a	2 mg Rh/m ³	
Ronnel	299-84-3	300 mg/m ³	
Rotenone	83-79-4	2,500 mg/m ³	
Selenium compounds (as Se)	7782-49-2	1 mg Se/m ³	
Selenium hexafluoride	7783-79-1	2 ppm	
Silica, amorphous	7631-86-9	3,000 mg/m ³	
Silica, crystalline (respirable dust)	14808-60-7		
cristobalite/tridymite	14808-60-7	25 mg/m ³	
quartz/tripoli	14808-60-7	50 mg/m ³	
Silver (metal dust and soluble compounds, as Ag)	7440-22-4 (metal)	10 mg Ag/m ³	
Soapstone	n/a	3,000 mg/m ³	
Sodium fluoroacetate	62-74-8	2.5 mg/m ³	
Sodium hydroxide	1310-73-2	10 mg/m ³	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Stibine	7803-52-3	5 ppm	
Stoddard solvent	8052-41-3	20,000 mg/m ³	
Strychnine	57-24-9	3 mg/m ³	
Styrene	100-42-5	700 ppm	
Sulfur dioxide	7446-09-5	100 ppm	
Sulfuric acid	7664-93-9	15 mg/m ³	
Sulfur monochloride	10025-67-9	5 ppm	
Sulfur pentafluoride	5714-22-7	1 ppm	
Sulfuryl fluoride	2699-79-8	200 ppm	
2,4,5-T	93-76-5	250 mg/m ³	
Talc	14807-96-6	1,000 mg/m ³	
Tantalum (metal and oxide dust, as Ta)	7440-25-7 (metal)	2,500 mg Ta/m ³	
TEDP	3689-24-5	10 mg/m ³	
Tellurium compounds (as Te)	13494-80-9	25 mg Te/m ³	
Tellurium hexafluoride	7783-80-4	1 ppm	
TEPP	107-49-3	5 mg/m ³	
Terphenyl (o, m, p isomers)	84-15-1	500 mg/m ³	
1,1,1,2-Tetrachloro 2,2-difluoroethane	76-11-9	2,000 ppm	
1,1,2,2-Tetrachloro 1,2-difluoroethane	76-12-0	2,000 ppm	
1,1,2,2-Tetrachloroethane	79-34-5	100 ppm	
Tetrachloroethylene	127-18-4	150 ppm	
Tetrachloronaphthalene	1335-88-2	Unknown	
Tetraethyl lead (as Pb)	78-00-2	40 mg Pb/m ³	
Tetrahydrofuran	109-99-9	2,000 ppm [10% LEL]	
Tetramethyl lead (as Pb)	75-74-1	40 mg Pb/m ³	
Tetramethyl succinonitrile	3333-52-6	5 ppm	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Tetranitromethane	509-14-8	4 ppm	
Tetryl	479-45-8	750 mg/m³	
Thallium (soluble compounds, as Tl)	n/a	15 mg Tl/m³	
Thiram	137-26-8	100 mg/m³	
Tin (inorganic compounds, as Sn)	n/a	100 mg Sn/m³	
Tin (organic compounds, as Sn)	n/a	25 mg Sn/m³	
Titanium dioxide	13463-67-7	5,000 mg/m³	
Toluene	108-88-3	500 ppm	
Toluene 2,4-diisocyanate	584-84-9	2.5 ppm	
o-Toluidine	95-53-4	50 ppm	
Tributyl phosphate	126-73-8	30 ppm	
1,1,2-Trichloroethane	79-00-5	100 ppm	
Trichloroethylene	79-01-6	1,000 ppm	
Trichloronaphthalene	1321-65-9	Unknown	
1,2,3-Trichloropropane	96-18-4	100 ppm	
1,1,2-Trichloro 1,2,2-trifluoroethane	76-13-1	2,000 ppm	
Triethylamine	121-44-8	200 ppm	
Trifluorobromomethane	75-63-8	40,000 ppm	
2,4,6-Trinitrotoluene	118-96-7	500 mg/m³	
Triorthocresyl phosphate	78-30-8	40 mg/m³	
Triphenyl phosphate	115-86-6	1,000 mg/m³	
Turpentine	8006-64-2	800 ppm	
Uranium (insoluble compounds, as U)	7440-61-1 (metal)	10 mg U/m³	
Uranium (soluble compounds, as U)	n/a	10 mg U/m³	
Vanadium dust	1314-62-1	35 mg V/m³	
Vanadium fume	1314-62-1	35 mg V/m³	

Substance	CAS no.	IDLH Value (1994)*	New/Updated Values (2016-present)**
Vinyl toluene	25013-15-4 (inhibited)	400 ppm	
Warfarin	81-81-2	100 mg/m ³	
Xylene (o, m, p isomers)	95-47-6	900 ppm	
Xylidine	1300-73-8	50 ppm	
Yttrium compounds (as Y)	7440-65-5	500 mg Y/m ³	
Zinc chloride fume	7646-85-7	50 mg/m ³	
Zinc oxide	1314-13-2	500 mg/m ³	
Zirconium compounds (as Zr)	7440-67-7 (Metal)	25 mg Zr/m ³	

Notes

- * Values are based on the NIOSH [Documentation for Immediately Dangerous to Life or Health Concentrations \(IDLHs\) \(1994\)](#)  [PDF – 10 MB]
- **IDLH values based on the 2014 publication [Current Intelligence Bulletin \(CIB\) 66: Derivation of Immediately Dangerous to Life or Health \(IDLH\)](#)

Page last reviewed: October 8, 2019