

Chemicals of Potential Concern (COPCs)

Definitions:

ACGIH TLV: Threshold Limit Values (TLVs®) refer to airborne concentrations of chemical substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed, day after day, over a working lifetime, without adverse health effects.

OSHA PEL: The maximum amount or concentration of a chemical that a worker may be exposed to under OSHA regulations either as a time-weighted average or as a ceiling limit.

AOEL: Hanford specific Expert Panel developed acceptable occupational exposure limits where specific OSHA, ACGIH based levels were unavailable. The process was to utilize other US agencies (NIOSH/AIHA) and foreign agencies (European standards) when available, followed by utilizing available literature epidemiological and toxicological information.

ACGIH Ceiling: The concentration that should not be exceeded during any part of the working exposure.

CAS: A CAS Number is a unique numerical identifier assigned by Chemical Abstracts Service (CAS) to every chemical substance described in the open scientific literature, currently including those described from at least 1957 through the present.

Chemical	CAS Number	Tank Farm OEL	
		Value	Reference
1 1,1'-Biphenyl	92-52-4	0.2 ppm	ACGIH TLV
2 1,3-Butadiene	106-99-0	1 ppm	OSHA PEL
3 1,3-Dinitrate-1,2,3-propantriol	623-87-0	0.05 ppm	AOEL
4 1,4-Butanediol dinitrate	3457-91-8	0.05 ppm	AOEL
5 1-Butanol	71-36-3	20 ppm	ACGIH TLV
6 2,4-Dimethylpyridine	108-47-4	0.5 ppm	AOEL
7 2,4-Pentadienenitrile	1615-70-9	0.3 ppm	AOEL
8 2-Ethylhex-2-enal	645-62-5	0.1 ppm	AOEL
9 2-Fluoropropene	1184-60-7	0.1 ppm	AOEL
10 2-Hexanone	591-78-6	5 ppm	ACGIH TLV
11 2-Methylbut-2-enal	1115-11-3	0.03 ppm	AOEL
12 2-Methylene butanenitrile	1647-11-6	0.3 ppm	AOEL
13 2-Nitro-2-methylpropane	594-70-7	0.3 ppm	AOEL
14 3-Buten-2-one	78-94-4	0.2 ppm	ACGIH ceiling
15 3-Methyl-3-buten-2-one	814-78-8	0.02 ppm	AOEL
16 4-Methyl-2-hexanone	105-42-0	0.5 ppm	AOEL
17 6-Methyl-2-heptanone	928-68-7	8 ppm	AOEL
18 Acetaldehyde	75-07-0	25 ppm	ACGIH ceiling
19 Acetonitrile	75-05-8	20 ppm	ACGIH TLV
20 Ammonia	7664-41-7	25 ppm	ACGIH TLV

21 Benzene	71-43-2	0.5 ppm	ACGIH TLV
22 Butanal	123-72-8	25 ppm	AOEL
23 Butanenitrile	109-74-0	8 ppm	AOEL
24 Butyl nitrate	928-45-0	8 ppm	AOEL
25 Butyl nitrite	544-16-1	0.1 ppm	AOEL
26 Chlorinated biphenyls	---	0.03 mg/m ³	AOEL
27 Dibutyl butylphosphonate	78-46-6	0.007 ppm	AOEL
28 Diethyl phthalate	84-66-2	5 mg/m ³	ACGIH TLV
29 Ethylamine	75-04-7	5 ppm	ACGIH TLV
30 Formaldehyde	50-00-0	0.3 ppm	ACGIH Ceiling
31 Furan	110-00-9	0.001 ppm	AOEL
32 2,3-Dihydrofuran	1191-99-7	0.001 ppm	AOEL
33 2,5-Dihydrofuran	1708-29-8	0.001 ppm	AOEL
34 2-Methylfuran	534-22-5	0.001 ppm	AOEL
35 2,5-Dimethylfuran	625-86-5	0.001 ppm	AOEL
36 2-Ethyl-5-methylfuran	1703-52-2	0.001 ppm	AOEL
37 4-(1-Methylpropyl)-2,3-dihydrofuran	34379-54-9	0.001 ppm	AOEL
38 3-(1,1-Dimethylethyl)-2,3-dihydrofur	34314-82-4	0.001 ppm	AOEL
39 2-Pentylfuran	3777-69-3	0.001 ppm	AOEL
40 2-Heptylfuran	3777-71-7	0.001 ppm	AOEL
41 2-Propylfuran	4229-91-8	0.001 ppm	AOEL
42 2-Octylfuran	4179-38-8	0.001 ppm	AOEL
43 2-(3-Oxo-3-phenylprop-1-enyl)furan	717-21-5	0.001 ppm	AOEL
44 2-(2-Methyl-6-oxoheptyl)furan	51595-87-0	0.001 ppm	AOEL
45 Heptanenitrile	629-08-3	6 ppm	AOEL
46 Hexanenitrile	628-73-9	6 ppm	AOEL
47 Mercury	7439-97-6	0.025 mg/m ³	ACGIH TLV
48 Methanol	67-56-1	200 ppm	ACGIH TLV
49 Methyl isocyanate	624-83-9	0.02 ppm	ACGIH TLV
50 Methyl nitrite	624-91-9	0.1 ppm	AOEL
51 Nitrous oxide (N ₂ O)	10024-97-2	50 ppm	ACGIH TLV
52 N-Nitrosodiethylamine	55-18-5	0.0001 ppm	AOEL
53 N-Nitrosodimethylamine	62-75-9	0.0003 ppm	AOEL
54 N-Nitrosomethylethylamine	10595-95-6	0.0003 ppm	AOEL
55 N-Nitrosomorpholine	59-89-2	0.0006 ppm	AOEL
56 Pentanenitrile	110-59-8	6 ppm	AOEL
57 Propanenitrile	107-12-0	6 ppm	AOEL
58 Pyridine	110-86-1	1 ppm	ACGIH TLV
59 Tributyl phosphate	126-73-8	0.2 ppm	ACGIH TLV