

Chemical Name	CAS	Current 5155 PEL TWA	Current 5155 STEL/C	New /revised OEL	STEL /C	UNITS	OEL source: ACGIH (Year), NIOSH, OEHHA, HESIS	OEL basis/Other listing/Notations	PEL/ TLV
Priority 1									
benzophenone	119619	NEW				ppm	HESIS	Prop 65 cancer, Allergen, Irr, CNS, 0.5 mg/m3 WEEL, UV-inhibitor used in plastics and other	
butyl acetates, all isomers	105464; 110190; 123864;	150		50/150		ppm	2016; HESIS	Eye and URT irr; HESIS: cancer	3
sulfur dioxide	7446095	5		0.25 S		ppm	2009	pulmonary function; lower respiratory tract irritation	20
turpentine, monoterpenes	8006642	100		20		ppm	2003	SEN, urt, CNS, skin irr, IUR 100-500 m lbs	5
Priority 2									
nickel carbonyl	13463393	0.001		0.05	C	ppm	2014	Lung irr	0.02
ethylene dichloride (1,2- dichloroethane)	107062	1	2/200	10		ppm	1996	A4, liver, nausea, 11-14x cancer risk oehha, epcra 14 us loc, cupa data, iur > 1b, cREL /P	0.1
methyl chloride	74873	5	100 (300)	50	100	ppm	1992	A4, CNS, liver, kidney, testicular, teratogen, epcra 1 ca loc, cREL, no risk data / O	0.1
nitromethane	75525	2		20		ppm	1997	A2, thyroid, urt, lung dam, CUPA use data	0.1
chloroform	67663	2		10		ppm	1990; OEHHA	A3, liver, embro/fetal, CNS, iur .5-1b, 7-29X cancer risk per oehha, cREL, aREL	0.2
ethyl acrylate	140885	1	5	5	15	ppm	1986	A4, urt, GI irr, CNS, eye irr, skin sen, epcra 3 ca lociur 100-500m	0.2
boron tribromide	10294334	1.0C		C 0.7S		ppm	2016	Resp tract irr; pneumonitis	0.7
acetaldehyde	75070	25		25 C		ppm-C	2014	A3, eye, urt irr, 13-16X cancer risk per oehha, cREL, IUR 100-500m	1
acrylamide	79061	0.03		0.03		mg/m ³	2005; OEHHA	cns, 5x cancer risk per oehha, IUR 100-500m epcra 2 ca loc; just make inh+vapor / PO	1
carbon black	1333864	3.5		3.5		mg/m ³	1985	A4	1

chlorine dioxide	10049044	0.1		0.1	ppm	2018	NO TLV adopted, CEILING ADDED	1
chloroprene	126998	10		10	ppm	1990	urt, eye irr, iur 100-500m epcra 13 us loc / PO	1
mettalic, as CrO		0.5		0.5	mg/m3	2018		1
cobalt and certain cobalt compounds	7440484	0.02		0.02	mg/m ³	1993	A3, BEI, asthma, pum func, heart, limited cancer data	1
dichlorobenzene, p-	106467	10	110 (200)	10	ppm	1990; OEHHA	A3, eye, kidney, CUPA usa data, 86X cancer risk per oehha, cREL iur 10-50m	1
Dimethylacetamide	127195	10		10	ppm	2018	S	1
endosulfan	115297	0.1		0.1	mg/m ³	2009	Pesticide 1,498 Calif use records 2008 but only change is inh+vapor / PO	1
ethanol	64175	1000		1000	ppm	2009	eye and upper respiratory tract irritation usage	1
								1
ethyl cyanoacrylate	7085850	0.2		0.2	1 ppm	2018	STEL	1
ethyl formate	109944	100		100	S ppm	2012	A4, urt irr	1
hexylene glycol	107415	25	C	25	50 ppm	2017	eye & urt irr	1
methyl 2-cyanoacryla	137053	0.2		0.2	1 ppm	2018	STEL	1
methyl ethyl ketone (MEK)	78933	200	300	200	ppm	2001; HESIS	Widespread uses. Hoell E et al; 2-Butanone. >500M - 1B. HESIS: Developmental.	1
mineral oil, highly refined		5		5	mg/m ³	2010	As aerosol, excluding metal working fluids; inhalable fraction	1
pentachlorophenol	87865	0.5		0.5	1 mg/m ³	2014	URT and eye irr; CNS and cardiac impair / O	1
phorate	298022	0.05	0.2	0.05	0.2 mg/m ³	2005	Pest 1,359 Calif use records 2008 just add inh + vap / O	1
tetrachloroethylene	127184	25	100	25	100 ppm	OEHHA;HESIS	A3, BEI, cns, iur 100-500m, epcra 27 ca loc, 130x cancer risk per oehha, cREL, aREL	1
thioglycolic acid	68111	1		1	ppm	2018	NO CHANGE	1
vanadium pentoxide	1314621	0.05		0.05	mg/m ³	2009	upper respiratory tract irritation; 0.05 mg/m3 Inhalable TWA	1
ethylene glycol	107211	40	C	25	50 ppm	2017	A4, urt irr	1.6
tungsten & compounds in absence of Cobalt as W	7440337	5		3	mg/m ³	2017	lung dam	1.67
acetonitrile	75058	40/60		20	ppm	2002	pulmonary effects; lab and possibly other	2
acetone	67641	500/750		250/500	ppm	2015; NIOSH	Eye and URT irr; CNS impair	2

chlorpyrifos	2921882	0.2		0.1			mg/m ³	2003	Pest >29,000 Calif use records 2008 / PO	2
cyanogen	460195	10		5		C	ppm	2016	Eye and URT irr	2
diethanolamine	111422	2		1			mg/m ³	2009	liver and kidney effects / PO	2
dimethylformamide	68122	10		5			ppm	2018	S	2
disulfoton	298044	0.1		0.05			mg/m ³	2002	Pest 499 Calif use records 2008 / PO	2
hydroquinone	123319	2		1			mg/m ³	2008	SEN eye irritation and damage	2
isopropanol TLV now 2-propanol	67630	400	500	200	400		ppm	2003	IUR > 1 billion lbs, cREL, aREL	2
methoxy-2-propanol, 1-	107982	100	150	50	100		ppm	2013	Eye and URT irr	2
methyl formate	107313	100	150	50	100		mg/m ³	2015	CNS impair, URT irr; eye dam / O	2
paraquat	4685147	0.1	0.5	0.05			mg/m³	2018		2 2018
n_propyl acetate	109604	200	250	100	150		ppm	2018		2 2018
trichloroacetic acid	76039	1		0.5			ppm	2015	Eye and URT irr	2
triethylamine	21448	1	C	0.5	1		ppm	2015	Visual impair; URT irr / O	2
atrazine	1912249	5		2			mg/m ³	2014	Hematologic, repro and developmental effects	2.5
ethylidene norbornene	16219753	5	C	2	4		ppm	2014	URT and eye irr	2.5
isopropyl acetate	108-21-4	250	300	100	150		ppm	2018		2.5
methyl isoamyl ketone	110123	50		20	50		ppm	2013	CNS impair, URT irr	2.5
indium phosphide	22398807	0.1		0.03			mg/m ³	2001	NTP testing concluded "clear evidence" for carcinogenicity, no risk value	3.33
hard metals, containing cobalt and tungsten carbide	7440484; 12070121	0.02		0.005			mg/m ³	2016	Pneumonitis	4
acetic anhydride	108247	5	C	1/3			ppm	2011	Eye and URT irr	5
chlorine	7782505	0.5		0.1	0.4		ppm	2018		5 2018
methyl styrene, α-	98839	50	100	10			ppm	2010	Chemical intermediate in plastics manufacture	5
nitrogen dioxide	10102440	1		0.2			ppm	2012	A4, lrt irr	5
pyridine	110861	5		1			ppm	2004; OEHHA	skin irritation, no risk value, liver & kidney damage, IUR 10-50m	5
thallium and cmpnds as TI	7440280	0.1		0.02			mg/m ³	2010	may be in semiconductors, infrared sensors, photocells / PO	5

thionyl chloride	7719097	1	C	0.2		ppm	2010	severe respiratory irritation mainly in synthesis of organochlorines	5
triorthocresyl phosphate	78308	0.1		0.02		mg/m ³	2016	Neurotoxicity; cholinesterase inhibition / O	5
phosphine	7803512	0.3	1	0.05	0.15	ppm	2018		6 2018
propylene dichloride (1,2 dichloropropane)	78875	75	110	10		ppm	2006	SEN upper respiratory tract irritation polymer manf, IUR 100-500m, cancer	7.5
butyl glycidyl ether, n-	2426086	25		3		ppm	2005	testicular atrophy, SEN / P	8.33

P2 CHEMICALS BELOW HAVE 10 OR GREATER PEL/TLV RATIO OR ARE NEW

boron trifluoride	7637072	1/3		0.1/0.7C		ppm	2016	Resp tract irr; pneumonitis	10
calcium silicate, nat occ as Wollastonite	1344952	10		1		mg/m ³	2016	Pneumoconiosis; pulm func.	10
carbaryl	63252	5		0.5		mg/m ³	2008	PEST cholinergic reproductive 3000 Calif use records 2008 TRI 1 Cal loc 18 US / O	10
dichlorvos (DDVP)	62737	1		0.1		mg/m ³	2002	PEST SEN, 460 Calif use records (2008) including structural/ commodity fumigation/ fly control / PO	10
ethyleneimine	151564	0.5		0.05	0.1	ppm	2009	8 CCR 5209 carcinogen (at 1% by wt of vol) upper respiratory irritation / O	10
furfural	98011	2		0.2		ppm	2017	A3, urt & eye irr, skin / O	10
malathion	121755	10		1		mg/m ³	2003	Pest >15,000 Calif use records 2008 / PO	10
maleic anhydride	108316	0.1		0.01		ppm	2011	resp sens	10
methyl isopropyl ketone	563804	200		20		ppm	2011	Embryo/fetal dam; neonatal toxicity	10
methyl parathion	298000	0.2		0.02		mg/m ³	2009	Restricted material 538 Calif use reports 2008 / PO	10
polyvinyl chloridedust (PVC)	9002862	10	T	1	R	mg/m ³	2008	pneumoconiosis; PFT changes; lower respiratory tract irritation	10
portland cement (<1% silica)	65997151	10		1		mg/m ³	2010	pulmonary function asthma	10
propyleneimine	75558	2		0.2	0.4	ppm	2009; OEHHA	upper respiratory tract irritation OEHHA cancer unit risk value / PO	10
thiobis, 4,4'- (6-tert-butyl-m-cresol)	96695	10		1		mg/m ³	2011	URT irr	10
warfarin	81812	0.1		0.01		mg/m ³	2016	Bleeding; teratogenic / O	10

methomyl	16752775	2.5		0.2		mg/m ³	2014	Cholinesterase inhib; male repro dam; hematologic eff / O	12.5
trivalent, as CR (III)		0.05		0.003		mg/m³	2018		16.7 2018
thiram	137268	1		0.05		mg/m ³	2008	PEST SEN 931 Calif use reports 2008 other industrial uses rubber accelerant lubricant additive. NIOSH says low vapor. TRI: 50 MTS tons in CA use	20
hexavalent, as CR(VI)		0.005		0.0002	0	mg/m³	2018		25 2018
chromite ore processing		0.005		0.0002	0	mg/m³	2018		25 2018
naled	300765	3		0.1		mg/m ³	2002	Pest SEN 2,772 Calif use records 2008 / PO	30
furfuryl alcohol	98000	10	15	0.2		ppm	2017	A3, urt & eye irr, skin / O	50
methoxyethanol	110496	5		0.1		ppm	2006; NIOSH	hematologic & repro effects OSHA FR no longer used, cupa data / P	50
acetate, 2-methoxyethanol, 2-	109864	5		0.1		ppm	2006; NIOSH	hematologic & repro effects OSHA FR no longer used, cupa data / P	50
phenylhydrazine (and salts)	100630	5		0.1		ppm	1988; OEHHA	anemia urt irritation chemical reagent OEHHA 500X cancer risk / O	50
lead chromate	7758976	0.02		0.0002	0	mg/m³	2018		100 2018
chromyl chloride as Cr(VI)		0.025		0.0001	0	ppm	2018		250 2018
phthalic anhydride	85449	1		0.002	0.01	ppm	2017	RSEN, DSEN, A4, Skin, resp sen, asthma / O	500
strontium chromate	7789062	0.0005					2018		
lithium hydride	7580678	0.025		0.05S		mg/m ³	2015	Eye and resp tract irr	
captafol	2425061	0.1		0.1 IFV		mg/m ³	2017	liver kidney da, dermal sen	
antimony trioxide	13096441	0.5		ALARA		mg/m ³	1979	antimony trioxide production TLV to lowest level, lung cancer, iur 1-10m	
carbon tetrachloride	56235	2	10/200	5	10	ppm	1990	A2, liver, 25-69X cancer risk per oehha, cREL, 0.4 aREL iur 100-500m / PO	
nickel (Metallic & compounds)	7440020	2		0.1	1.5	ppm	2001; HESIS	Dermatitis and pneumoconiosis; HESIS: cancer	20
Tetrafluoroethylene	116143	2				ppm	2001; HESIS	kidney toxicity; cancer	
methanol	67561	200	250			ppm	2009; HESIS	Industrial solvent; Occ exp through inh and der. HESIS: Developmental. / P	
butane (all isomers)	75285	800		1000 STEL		ppm	2013	CNS impair	No TLV for butane but a STEL; major use in new CANN industry.
	106978								
temephos	3383968	10T	5R	1		mg/m ³	2005	Pest 32 Calif use reports 2008 mainly mosquito abatement larvicide / O	
clopidol	2971906	10T	5R	3	(IFV)	mg/m ³	2013	Mutagenic eff	
carbon monoxide	630080	25/200		25		ppm	1989	BEI, COHb-emia, aREL	
acetamide	60355	NEW		1		ppm	2017; OEHHA	limited exp iur10-500k	

dioxolane, 1,3	646060	NEW	20	ppm	2002	hematologic, limited tox data, epcra 1 ca loc, solvent, feedstock, IUR 10-50 million lbs
tert-amyl methyl ether	994058	NEW	20	ppm	2002	cns, embryo/fetal damage, gas additive, IUR > 1 bil lbs, limited tox data
kerosene jet fuel, total HC vapor	8008206	NEW	200		2003	IUR > 1 billion lbs, sampling limitations. NOT VAPOR?? DOC SAYS MIN AEROSOL ONLY / O
dodecyl mercaptan	112550	NEW	0.1	ppm	2004	SEN, urt, feedstock, IUR 10-50 million lbs, cupa data
hexahydrophthalic anhydride	1314903; 141666213	NEW	0.005	mg/m ³	2004	SEN, rsen, epoxy curing agent, no ca use data, IUR 1-10 mil lbs
natural rubber latex, as total protein	9006046	NEW	0.001	mg/m ³	2004	SEN skin sensitization, air sampling and analysis limitations
perfluorobutyl ethylene	19430934	NEW	100	ppm	2004	hematologic effects, teflon ingred, IUR 100-500 K lbs, low tox
monochloroacetic acid	79118	NEW	0.5	ppm	2006	urt, various uses, high epa use, IUR 100-500 mil lbs, canning use, dermal tox / O
alachlor	15972608	NEW	1	mg/m ³	2007	PEST SEN Restricted material 115 Calif use records 2008 on 4,343 acres; NIOSH 5602 Inh+vap ok
mineral oil, mildly refined		NEW	ALARA	mg/m ³	2010	Excluding metal working fluids
allyl bromide	106956	NEW	0.1/0.2	ppm	2011	Eye and urt irr / O
carbonyl sulfide	463581	NEW	5	ppm	2011	CNS impair
phthalidionitrile, 0-	91156	NEW	1	mg/m ³	2011	CNS convul; body weight eff
piperazine and salts, as piperazine	142643	NEW	0.03	ppm	2011	Resp sens; asthma
diethylene glycol monobutyl ether	112345	NEW	10	ppm	2012	Hematologic; liver and kidney eff
diethylhydroxylamine, n,n-	3710847	NEW	2	ppm	2012	URT irt
cyanogen bromide	506683	NEW	0.3	C ppm	2013	Eye and resp tract irr; pulm edema
boron trichloride	10294345	NEW	0.7S	ppm	2016	Resp tract irr; pneumonitis
simazine	122349	NEW	0.5	mg/m ³	2016	Hematologic effects
cadusafos	95465999	NEW	0.001	mg/m ³	2017	CNS impair / O
folpet	133073	NEW	1	mg/m ³	2017	DSEN, A3, liver dam
methylacetylene-propdiene mixture	56960919	NEW	1000 1250	ppm	2017	cns

dimethyl-p-toluidine, n, n-	99978	NEW		ppm	HESIS	Widespread use to cure methyl methacrylate but polymerization is rarely complete. use in dental materials and bone cements, artificial fingernails. 62,720 U.S. workers were exp (NIOSH, 1990). >500K-1M. Cancer
myrcene, beta	123353	NEW		ppm	HESIS	Prep of perfume chemicals and flavoring, detergent additive; Occ exp through inh and der. >10M - 50M. Cancer.
propylene glycol mono-t-butyl ether	57018527	NEW		ppm	HESIS	Solvent in all purpose cleaners, inks, adhesives, nail polish lacquers. >1M-10M. Cancer.
anthraquinone	84651	NEW		mg/m ³	HESIS	Manuf paper products more than 10,000 workers exp. Reg'd pesticide (seed treatment). Chem inter for dyes and pigments. Catalyst in isomerization of linseed and other veg oils. (EPA); 5.5 M (2011). Cancer
aldicarb	116063	NEW	0.07	mg/m ³	no TLV	Pest WEEL no TLV 819 Calif use records 2008 / O
benzaldehyde	100527	NEW		ppm	no TLV	DSEN, limited tox data, flavor use
butyraldehyde	123728	NEW	25	ppm	no TLV	DSEN chem intermediate, IUR > 1billion lbs
chlorinated paraffins	108171262	NEW			no TLV	cancer, unit risk value, sampling limitation, iur 50-100m
decamethylcyclopentasiloxane (D5)	541026	NEW			no TLV	Liver changes may be the most sensitive non-cancer endpoint, possible cancer
diesel engine exhaust		NEW			no TLV	cancer, MSHA exp limit, ARB substance of study, cREL, sampling limitations, proposed tlv withdrawn in 2004
nitrilotriacetic acid	139139	NEW			no TLV	epcra 1 ca loc, cupa data NTP 11 ROC describes as "laundry detergent builder"
thiourea	62566	NEW			no TLV	epcra 19 us loc, cupa data, iur .5-1m
nitro-o-toluidine, 5-	99558	NEW	1	mg/m ³	2007	liver damage, dye manf, IUR 100-500 K lbs, low tox
natural rubber latex, as inhbl allergenic protein	9006046	NEW	0.0001	mg/m ³	2008	SEN skin sensitization, air sampling and analysis limitations
zinc chromate	11104869				2018	WD see chromium and inorganic compounds 2018; what Cr category to use?

Priority 2* - Special Committee Needed Instead of HEAC (see Notation section for reason)

arsine	7784421	0.05		0.005		ppm	2007	HEAC rec to group with update to section 5214 Arsenic, kidney; peripheral nervous system, vascular system, electronic use, aREL	10
beryllium	7440417	0.0002		0.00005		mg/m ³	2014;	new OSHA std, SEN notation and retained A1 list for cancer	4
bisphenol A (BPA)	80057	NEW		no tlv		mg/m ³	HESIS	primarily public health issue	
bromopropane, 1-	106945	5		0.1		ppm	2014; HESIS	Stakeholder concerns, use in decline, CNS impair, peripheral neuropathy; hemaotological eff, developmental and repro toxicity (male and female)	50
butyl benzyl phthalate	85687	NEW		No TLV		mg/m ³	no TLV; OEHH	Group with all phthalates, Primarily public health issue, oehha rpt, cosmetic use	
carbon nanotubes	7782425	15		0.001		mg/m ³	2013; HESIS	Sampling issues, Group with other nanoparticles, NIOSH REL = 1 µg/m ³	15000
di(2-ethylhexyl)phthalate (DEHP)	117817	5		5		mg/m ³	1998; OEHHA	Group with all phthalates, Primarily public health issue, Plasticizer A2, LRT, irr, iur 100-500m, Prop 65 repro, 0.4X cancer risk per oehha	1
diacetyl	431038	0.012	0.035	0.01	0.02	ppm	2012; HESIS	Section 5197 would need update, lung damage (bronchiolitis obiterans-like illness); NIOSH REL 0.005/0.025;	1.2
dibutyl phthalate	84742	5		5		mg/m ³	1990; OEHHA	Group with all phthalates, Primarily public health issue, testicular damage, eye, URT irr, Prop 65 repro, epcra 2 CA locs iur 10-50m	1
Diisononyl phthalate (DINP)	28553120	NEW				mg/m ³	HESIS	Group with all phthalates, Primarily public health issue, 95% used in plasticizers for PVC appl and flex vinyls. Also used in glues, dyestuffs and pigments, paints, printing, metal coating, sealing comps, furn fabric, carpet tile, vinyl tile (OEHHA).	
di-n-hexyl phthalate (DnHP)	84753	NEW				mg/m ³	HESIS	Group with all phthalates, Primarily public health issue, Plasticizer, repro per oehha	
ethyl isocyanate	109900	NEW		0.02/0.06		ppm	2013	Group with all isocyanates, sampling issues, URT and eye irt / O	
formaldehyde	50000	0.75	2	0.1	0.3	ppm	2017	Section 5217 would need update	7.5

gallium arsenide	1303000	see 5214		0.003		mg/m ³	2005	Section 5214 would need update, Irr irrit, semicon use, 5214 comp std	
isocyanates (TRIG &/or ind sus)		NEW		0.017	0.07	mg/m ³	no TLV	Group with all isocyanates, sampling issues, SEN respiratory sensitization	
methyl isocyanate	624839	NEW		0.02	0.06	ppm	2013	Group with all isocyanates, sampling issues, URT and eye irrit / O	
pentanedione, 2,3-	600146	0.012	0.035	0.0093	0.03	ppm	LV; NIOSH; HESIS	Section 5197 would need update, similar toxicity to diacetyl; REL = 0.009.3/0.031 ppm TLV/STEL; HESIS	1.3
pentanedione, 2,4-	123546	NEW		25		ppm	2010; HESIS	Section 5197 would need update, Neurotoxicity; CNS impair / O	
phenyl isocyanate	103719	NEW		0.005	0.02	ppm	2013	Group with all isocyanates, sampling issues, dermatitis; Hematologic eff; testicular dam / O	
silica (crystalline quartz & cristobalite)		0.05		0.025		mg/m ³	2006	Section 5204 would need update, A2 carc pulmonary fibrosis lung cancer	2
styrene	100425	50	100 (500)	20		ppm	2001; OEHHA	Stakeholder concerns, CNS, urt, peripheral neuropathy, IUR > 1 bil lbs, cREL, aREL / PO	2.5
titanium dioxide, ultrafine (<100 nm)	13463677	10		0.3		mg/m ³	2011; HESIS	Group with other nanoparticles, sampling issues, NIOSH REL = 2.4 mg/m3 for fine, 0.3 mg/m3 for ultrafine	33
toluene diisocyanate, 2-4 and 2-6	584849 91087	0.005	0.02	0.001	0.01	ppm	2016	Group with all isocyanates, sampling issues, Asthma; pulm func; eye irrit / O	5

NOTES: R = Respirable; T = Total; IFV = Inhalable; P= PEL skin notation, O=other OEL skin notation; S= STEL; C = Ceiling limit; NEW = would be new PEL