

Priority List of Substances for Updating Section 5155 (as of 3/2017)

Chemical Name	CAS	Current 5155 PEL TWA/STEL/C	UNITS	SKIN NOTE	New/revised OEL	Other OEL like ACGIH TLV (Year), NIOSH REL, OEHHA, IRIS	Notations and listed OEL basis
Priority 1							
acetonitrile	75058	40/60	ppm	PO	20	2002	pulmonary effects; lab and possibly other solvent uses
aluminum metal & insoluble	7429905	5/10 RT	mg/m ³		1 R	2008	pneumoconiosis; neurotoxicity; lower respiratory tract irritation
butoxyethyl acetate, 2-	112072	NEW	ppm		20	2003	consistency with analogue 2-butoxyethanol; found in recent inspection
butyl acetates, all isomers	105464; 110190; 123864; 540885	150	ppm		50/150	2016, HESIS	Eye and URT irr
hydrogen sulfide	7783064	10/15	ppm		1/5	2010	CNS impairment upper respiratory tract irritation
manganese (elemental and inorganic compounds, as Mn)	7439965	0.2	mg/m ³		0.02R/0.1I	2013	numerous NOAEL established at this level
methyl isobutyl ketone	108101	50/75	ppm		20/75	2010	dizziness headache upper respiratory irritation
polyvinyl chloride dust (PVC)	9002862	10 T	mg/m ³		1 R	2008	pneumoconiosis; PFT changes; lower respiratory tract irritation
pyridine	110861	5	ppm		1	2004, OEHHA	skin irritation, no riks value, liver & kidney damage, iur 10-50m
sulfur dioxide	7446095	5	ppm		0.25 S	2009	pulmonary function; lower respiratory tract irritation
thallium and cmpnds as Tl	7440280	0.1	mg/m ³	PO	0.02	2010	may be in semiconductors, infrared sensors, photocells
trichloropropane, 1,2,3-	96184	10	ppm		0.005	2014, OEHHA, HESIS	cancer

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turpentine, monoterpenes	8006642	100	ppm		20	2003	SEN, urt, CNS, skin irr, IUR 100-500 m lbs
Priority 2							
acetaldehyde	75070	25	ppm-C		25 C	2014	A3, eye, urt irr, 13-16X cancer risk per oehha, cREL, IUR 100-500m
acetic anhydride	108247	5 C	ppm		1/3	2011	Eye and URT irr
acetamide	60355	NEW	ppm		1	2017, OEHHA	limited exp iur10-500k
acetone	67641	500/750	ppm		250/500	2015, NIOSH	Eye and URT irr; CNS impair
acrylamide	79061	0.03	mg/m ³	PO	0.03	2005, OEHHA	cns, 5x cancer risk per oehha, IUR 100-500m epcra 2 ca loc; just make PEST SEN Restricted material 115 Calif use records 2008 on 4,343
alachlor	15972608	NEW	mg/m ³		1	2007	Pest WEEL no TLV 819 Calif use records 2008
aldicarb	116063	NEW	mg/m ³	O	0.07	no TLV	
allyl bromide	106956	NEW	ppm	O	0.1/0.2	2011	Eye and urt irr
anthraquinone	84651		mg/m ³			HESIS	Manufacturing of paper and paper products w more than 10,000 workers exposed(EPA). Reg'd pesticide (seed treatment). High production volume in antimony trioxide production TLV to lowest level, lung cancer, iur 1-10m
antimony oxide	13096441	0.5	mg/m ³		0.5	1979	kidney; peripheral nervous system, vascular system, electronic use,
arsine*	7784421	0.05	ppm		0.005	2007	Hematologic, repro and developmental effects
atrazine	1912249	5	mg/m ³		2	2014	
benzaldehyde	100527	NEW	ppm		2	no TLV	DSEN, limited tox data, flavor use
Benzophenone	119619	NEW	ppm			HESIS	
beryllium *	7440417	0.0002	mg/m ³		0.00005	2014,	new OSHA std added SEN notation and retained A1 list for cancer

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bisphenol A (BPA)	80057	NEW	mg/m ³			HESIS	
boron tribromide	10294334	1.0C	ppm		C 0.7S	2016	Resp tract irr; pneumonitis
boron trichloride	10294345	NEW	ppm		0.7S	2016	Resp tract irr; pneumonitis
boron trifluoride	7637072	1/3	ppm		0.1/0.7C	2016	Resp tract irr; pneumonitis
bromopropane, 1- *	106945	5	ppm		0.1	2014, HESIS	CNS impair, peripheral neuropathy; hemaotological eff, developmental and
butane (all isomers)	5285/10697	800	ppm		1000S	2013	CNS impair
butane,all isomers	5285; 10697	800	ppm		1000S	2017	
butyl benzyl phthalate*	85687	NEW	mg/m ³		No TLV	no TLV, OEHHA	oehha rpt, cosmetic use
butyl glycidyl ether, n-	2426086	25	ppm	P	3	2005	testicular atrophy, SEN
butyraldehyde	123728	NEW	ppm		25	no TLV	DSEN chem intermediate, IUR > 1billion lbs
cadusafos	95465999	NEW	mg/m ³	O	0.001	2017	CNS impair
calcium silicate, naturally occuring as	1344952	10	mg/m ³		1	2016	Pneumoconiosis; pulm func.
captafol	2425061	0.1	mg/m ³		0.1 IFV	2017	
carbaryl	63252	5	mg/m ³	O	0.5	2008	PEST cholinergic reproductive 3000 Calif use records 2008 TRI 1
carbon black	1333864	3.5	mg/m ³		3.5	1985	A4
carbon monoxide	630080	25/200	ppm		25	1989	BEI, COHb-emia, aREL
carbon nanotubes *	7782425	15	mg/m ³		1 µg/m3	2013; HESIS	NIOSH REL = 1 µg/m3
carbon tetrachloride	56235	2/10/200	ppm	PO	5/10	1990	A2, liver, 25-69X cancer risk per oehha, cREL, aREL iur 100-500m
carbonyl sulfide	463581	NEW	ppm		5	2011	CNS impair

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chlorinated paraffins	1.08E+08	None				no TLV	cancer, unit risk value, sampling limitation, iur 50-100m
chloroform	67663	2	ppm		10	1990, OEHHA	A3, liver, embro/fetal, CNS, iur .5-1b, 7-29X cancer risk per oehha, cREL, urt, eye irr, iur 100-500m epcra 13 us loc
chloroprene	126998	10	ppm	PO	10	1990	
chlorpyrifos	2921882	0.2	mg/m ³	PO	0.1	2003	Pest >29,000 Calif use records 2008
clopidol	2971906	10T/5R	mg/m ³		3 (IFV)	2013	Mutagenic eff
cobalt and certain cobalt compounds	7440484	0.02	mg/m ³		0.02	1993	A3, BEI, asthma, pum func, heart, limited cancer data
cyanogen	460195	10	ppm		5C	2016	Eye and URT irr
cyanogen bromide	506683	NEW	ppm		0.3 S	2013	Eye and resp tract irr; pulm edema
decamethylcyclopenta siloxane (D5)	541026	NEW				no TLV	Liver changes may be the most sensitive non-cancer endpoint,
di(2-ethylhexyl)phthalate	117817	5/10	mg/m ³		5	1998; OEHHA	Plasticzer A2, LRT, irr, iur 100-500m, Prop 65 repro, 0.4X cancer risk per lung damage (bronchiolitis obiterans-like illness); NIOSH REL 0.005/0.025
diacetyl*	431038	0.012/0.035	ppm		0.01/0.02	2012, HESIS	testicular damage, eye, URT irr, Prop 65 repro, epcra 2 CA locs iur 10-50m
dibutyl phthalate*	84742	5	mg/m ³		5	1990, OEHHA	A3, eye, kidney, CUPA usa data, 86X cancer risk per oehha, cREL iur 10-
dichlorobenzene, p-	106467	10/110/200	ppm		10	1990, OEHHA	PEST SEN, 460 Calif use records (2008) including structural/ cancer, MSHA exp limit, ARB substance of study, cREL, sampling
dichlorvos (DDVP)	62737	1	mg/m ³	PO	0.1	2002	
diesel engine exhaust		None				no TLV	
diethanolamine	111422	2	mg/m ³	PO	1	2009	liver and kidney effects
diethylene glycol monobutyl ether	112345	NEW	ppm		10	2012	Hematologic; liver and kidney eff
diethylhydroxylamine, n,n-	3710847	NEW	ppm		2	2012	URT irt
Diisononyl phthalate (DINP)*	28553120	NEW	mg/m ³			HESIS	95% used in plasticizers for PVC applications and flexible vinyls. Also used

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dimethyl-p-toluidine, n, n-	99978		ppm			HESIS	Widespread commercial use to cure methyl methacrylate monomers. Plasticizer, repro per oehha
di-n-hexyl phthalate (DnHP)*	84753	NEW	mg/m ³			HESIS	
dioxolane,1,3	646060	NEW	ppm		20	2002	hematologic, limited tox data, epcra 1 ca loc, solvent, feedstock, IUR 10-
disulfoton	298044	0.1	mg/m ³	PO	0.05	2002	Pest 499 Calif use records 2008
dodecyl mercaptan	112550	NEW	ppm		0.1	2004	SEN, urt, feedstock, IUR 10-50 million lbs, cupa data
endosulfan	115297	0.1	mg/m ³	PO	0.1	2009	Pesticide 1,498 Calif use records 2008 but only change is inh+vapor
ethanol	64175	1000	ppm		S	2009	eye and upper respiratory tract irritation usage
ethyl acrylate	140885	5/25	ppm		5/15	1986	A4, urt, GI irr, CNS, eye irr, skin sen, epcra 3 ca lociur 100-500m
ethyl formate	109944	100	ppm		100S	2012	
ethyl isocyanate *	109900	NEW	ppm	O	0.02/0.06	2013	URT and eye irt
ethylene dichloride	107062	1	ppm	P	10	1977	A4, liver, nausea, 11-14x cancer risk oehha, epcra 14 us loc, cupa data, iur
ethylene glycol	107211	40C	ppm		25/50	2017	
ethyleneimine	151564	0.5	ppm	O	0.05/1	2009	8 CCR 5209 carcinogen (at 1% by wt of vol) upper respiratory irritation
ethylidene norbornene	16219753	5C	ppm		2/4	2014	URT and eye irr
folpet	133073	NEW	mg/m ³		1	2017	
formaldehyde *	50000	0.75/2	ppm		0.1/0.3	2017	
furfural	98011	2	ppm	O	0.2	2017	
furfuryl alcohol	98000	10/15	ppm	O	0.2	2017	

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gallium arsenide*	1303000	see 5214	mg/m ³		0.003	2005	Irt irr, semicon use, 5214 comp std
hard metals, containing cobalt and hexahydrophthalic anhydride	7440484; 12070121 1314903; 14166621	0.02 NEW	mg/m ³ mg/m ³		0.005 0.0005	2016 2004	Pneumonitis SEN, rsen, epoxy curing agent, no ca use data, IUR 1-10 mil lbs
hexylene glycol	107415	25C	ppm		25/50	2017	
hydroquinone	123319	2	mg/m ³		1	2008	SEN eye irritation and damage
indium phosphide	22398807	0.1	mg/m ³		0.03	2001	NTP testing concluded "clear evidence" for carcinogenicity, no
isocyanates (TRIG &/or ind subs)*		NEW	mg/m ³		0.017/0.07	no TLV	SEN respiratory sensitization
isopropanol TLV now 2-propanol	67630	400/500	ppm		200/400	2003	IUR > 1 billion lbs, cREL, aREL
kerosene jet fuel, total HC vapor	8008206	NEW		O	200	2003	IUR > 1 billion lbs, sampling limitations. NOT VAPOR?? DOC
lithium hydride	7580678	0.025	mg/m ³		0.05S	2015	Eye and resp tract irr
malathion	121755	10	mg/m ³	PO	1	2003	Pest >15,000 Calif use records 2008
maleic anhydride	108316	0.1	ppm		0.01	2011	resp sens
methanol	67561	200/250	ppm	P		2009; HESIS	Industrial solvent; Occupational exposure to methanol may occur
methomyl	16752775	2.5	mg/m ³	O	0.2	2014	Cholinesterase inhib; male repro dam; hematologic eff
methoxy-2-propanol, 1-	107982	100/150	ppm		50/100	2013	Eye and URT irr
methoxyethanol acetate, 2-	110496	5	ppm	P	0.1	2006, NIOSH	hematologic & repro effects OSHA FR no longer used, cupa data
methoxyethanol, 2-	109864	5	ppm	P	0.1	2006, NIOSH	hematologic & repro effects OSHA FR no longer used, cupa data
methyl chloride	74873	5/100/300	ppm	O	50/100	1992	A4, cns, liver, kidney, testicular, teratogen, epcra 1 ca loc, cREL, no
methyl ethyl ketone (MEK)	78933	200/300	ppm		10	2001; HESIS	Widespread. Production of paints, lacquers, varnishes, paint thinners and

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methyl formate	107313	100/150	mg/m ³	O	50/100	2015	CNS impair, URT irr; eye dam
methyl isoamyl ketone	110123	50	ppm		20/50	2013	CNS impair, URT irr
methyl isocyanate *	624839	NEW	ppm	O	0.02/0.06	2013	URT and eye irt
methyl isopropyl ketone	563804	200	ppm		20	2011	Embryo/fetal dam; neonatal toxicity
methyl parathion	298000	0.2	mg/m ³	PO	0.02	2009	Restricted material 538 Calif use reports 2008
methyl styrene, α-	98839	50/100	ppm		10	2010	Chemical intermediate in plastics manufacture
methylacetylene-propdiene mixture	56960919	NEW	ppm		1000/1250	2017	
mineral oil, highly refined		5	mg/m ³		5	2010	As aerosol, excluding metal working fluids; inhalable fraction
mineral oil, mildly refined		NEW	mg/m ³		ALARA	2010	Excluding metal working fluids
monochloroacetic acid	79118	NEW	ppm	O	0.5	2006	urt, various uses, high epa use, IUR 100-500 mil lbs, canning use, dermal
myrcene, beta	123353		ppm		>10M - 50M	HESIS	Preparation of perfume chemicals and flavoring, detergent additive;
naled	300765	3	mg/m ³	PO	0.1	2002	Pest SEN 2,772 Calif use records 2008
natural rubber latex, as total protein	9006046	NEW	mg/m ³		0.001	2004	SEN skin sensitization, air sampling and analysis limitations
natural rubber latex, as inhbll allergenic	9006046	NEW	mg/m ³		0.0001	2008	SEN skin sensitization, air sampling and analysis limitations
nickel (Metallic & compounds)	7440020	2	ppm		0.1 - 1.5	2001; HESIS	Dermatitis and pneumoconiosis
nickel carbonyl	13463393	0.001	ppm		0.05 C	2014	Lung irr
nitrilotriacetic acid	139139	None				no TLV	epcra 1 ca loc, cupa data NTP 11 ROC describes as "laundry detergent"
nitrogen dioxide	10102440	1.0 S	ppm		0.2	2012	
nitromethane	75525	2	ppm		20	1997	A2, thyroid, urt, lung dam, CUPA use data

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nitro-o-toluidine, 5-	99558	NEW	mg/m ³		1	2007	liver damage, dye manf, IUR 100-500 K lbs, low tox
pentachlorophenol	87865	0.5	mg/m ³	O	0.5/1.0	2014	URT and eye irr; CNS and cardiac impar
pentanedione, 2,3- *	600146	0.012/0.035	ppm		0.009.3/0.031	no TLV; NIOSH; HESIS	similar toxicity to diacetly; REL = 0.009.3/0.031 ppm TLV/STEL
pentanedione, 2,4- *	123546	NEW	ppm	O	25	2010; HESIS	Neurotoxicity; CNS impair
peracetic acid	79210	NEW	ppm		0.4 S	2013	URT, eye and skin irr
perfluorobutyl ethylene	19430934	NEW	ppm		100	2004	hematologic effects, teflon ingred, IUR 100-500 K lbs, low tox
phenyl isocyanate *	103719	NEW	ppm	O	0.005/0.015	2013	dermatitis; Hematologic eff; testicular dam
phenylhydrazine (and salts)	100630	5	ppm	O	0.1	1988, OEHHA	anemia urt irritation chemical reagent OEHHA 500X cancer risk
phorate	298022	0.05/0.2	mg/m ³	O	0.05/0.2	2005	Pest 1,359 Calif use records 2008 iust add inh + vap
phthalic anhydride	85449	1	ppm	O	0.002/0.005	2017	
phthalidionitrile, 0-	91156	NEW	mg/m ³		1	2011	CNS convul; body weight eff
piperazine and salts, as piperazine	142643	NEW	ppm		0.03	2011	Resp sens; asthma
portland cement (<1% silica)	65997151	10	mg/m ³		1	2010	pulmonary function asthma
propylene dichloride (1,2 dichloropropane)	78875	75/110	ppm		10	2006, IARC	SEN upper respiratory tract irritation polymer manf, IUR 100-
propyleneimine	75558	2	ppm	PO	0.2/0.4	2009, OEHHA	upper respiratory tract irritation OEHHA cancer unit risk value
propylene glycol mono-t-butyl ether	57018527		ppm			HESIS	Solvent in all purpose cleaners, inks, adhesives, nail polish lacquers. >1M-
silica (crystalline quartz & cristobalite) *		0.05	mg/m ³		0.025	2006	A2 carc pulmonary fibrosis lung cancer
simazine	122349	NEW	mg/m ³		0.5	2016	Hematologic effects
styrene *	100425	50/100/500	ppm	PO	20	2001, OEHHA	CNS, urt, peripheral neuropathy, IUR > 1 bil lbs, cREL, aREL

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temephos	3383968	10/5 TR	mg/m ³	O	1	2005	Pest 32 Calif use reports 2008 mainly mosquito abatement
tert-amyl methyl ether	994058	NEW	ppm		20	2002	cns, embryo/fetal damage, gas additive, IUR > 1 bil lbs, limited tox
tetrachloroethylene	127184	25/100	ppm		25/100	IRIS, IARC	A3, BEI, cns, iur 100-500m, epcra 27 ca loc, 130x cancer risk per oehha,
Tetrafluoroethylene	116143	2	ppm			2001; HESIS	kidney toxicity; cancer
thiobis, 4,4'- (6-tert-butyl-m-cresol)	96695	10	mg/m ³		1	2011	URT irr
thionyl chloride	7719097	1 C	ppm		0.2	2010	severe respiratory irritation mainly in synthesis of organochlorines
thiourea	62566	None				no TLV	epcra 19 us loc, cupa data, iur .5-1m
thiram	137268	1	mg/m ³		0.05	2008	PEST SEN Calif commodity fumigant 931 Calif use reports
titanium dioxide, ultrafine (<100 nm) *	13463677	10	mg/m ³		0.3	2011; HESIS	NIOSH REL = 2.4 mg/m ³ for fine, 0.3 mg/m ³ for ultrafine
toluene diisocyanate, 2-4 and 2-6 *	34849; 9104	0.005/0.02	ppm	O	0.001/0.005	2016	Asthma; pulm func; eye irr
trichloroacetic acid	76039	1	ppm		0.5	2015	Eye and URT irr
triethylamine	21448	1.0 C	ppm	O	0.5/1	2015	Visual impair; URT irr
triorthocresyl phosphate	78308	0.1	mg/m ³	O	0.02	2016	Neurotoxicity; cholinesterase inhibition
tungsten	7440337	5	mg/m ³		3	2017	
vanadium pentoxide	1314621	0.05	mg/m ³		0.05	2009	upper respiratory tract irritation; 0.05 mg/m ³ Inhalable TWA
warfarin	81812	0.1	mg/m ³	O	0.01	2016	Bleeding; teratogenic