



Policy, Regulation and Research Department

Mailing Address

PO Box 5350 Stn Terminal
Vancouver BC V6B 5L5

Location

6951 Westminster Highway
Richmond BC

Telephone 604 276-5160
Fax 604 279-7599

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Update 2024 – 2

TO: HOLDERS OF THE *PREVENTION MANUAL*

This update of the *Prevention Manual* contains amendments implemented since update 2024 – 1.

The revised pages are amendments for:

- Item R5.48-1, *Exposure Limits*

A summary is attached, and the new pages are included as part of the package, effective **April 11, 2024**.

These pages and the complete manual are available at

<https://www.worksafebc.com/en/law-policy/occupational-health-safety/ohs-policies>

Charmaine Chin
Head of Executive Operations

Attachments

PREVENTION MANUAL
Transmittal Sheet for Update 2024 – 2

Check As Done	Remove Old Pages Numbered/Titled:	Insert New Pages Numbered/Titled:
<input type="checkbox"/>	R5.48-1	Pages 1 to 13

RE: Exposure Limits**ITEM: R5.48-1**

BACKGROUND

1. Explanatory Notes

Section 5.48 provides established limits for a worker's exposure to hazardous chemical substances. Generally, these exposure limits are established according to the Threshold Limit Values ("TLVs") adopted by the American Conference of Governmental Industrial Hygienists ("ACGIH"). However, the Board has authority to make exceptions and adopt exposure limits for specific chemical substances that are not consistent with the TLVs established by the ACGIH. This policy sets out those exceptions.

2. The OHSR

Section 5.48:

Except as otherwise determined by the Board, the employer must ensure that no worker is exposed to a substance that exceeds the ceiling limit, short-term exposure limit, or 8-hour TWA limit prescribed by ACGIH.

Section 5.57:

- (1) If a substance identified as any of the following is present in the workplace, the employer must replace it, if practicable, with a material which reduces the risk to workers:
 - (a) ACGIH A1 or A2, or IARC 1, 2A or 2B carcinogen;
 - (b) ACGIH reproductive toxin;
 - (c) ACGIH sensitizer;
 - (d) ACGIH L endnote.
- (2) If it is not practicable to substitute a material which reduces the risk to workers, in accordance with subsection (1), the employer must implement an exposure control plan to maintain workers' exposure as low as reasonably achievable below the exposure limit established under section 5.48.
- (3) The exposure control plan must meet the requirements of section 5.54.

3. Preamble to Policy

The following is a preamble to be applied to those exposure limits developed by the Board as an exception to the TLVs established by the ACGIH:

An exposure limit is a maximum allowed airborne concentration and is not intended to represent a fine line between safe and harmful conditions. In determining an exposure limit, it is not possible to take into account all factors that could influence the effect that exposure to the substance may have on an individual worker. Therefore, for all hazardous substances, regardless of any assigned exposure limit, the guiding principle is elimination of exposure or reduction to the lowest level that is reasonably achievable below the exposure limit.

Due to a wide variation in individual susceptibility, some workers may experience discomfort from some substances at concentrations at or below the exposure limit. Others may be affected more seriously by aggravation of a pre-existing condition, or by development of an occupational disease. Furthermore, other workplace contaminants may affect an individual's response. The effects of combined chemical exposures are often unknown or poorly defined.

POLICY

1. Table of Exposure Limits for Excluded Substances

As presented in the table below, the Board has determined exposure limits for the following specific substances that differ from the TLVs established by the ACGIH. For solid and liquid particulate matter, except where the terms inhalable, thoracic, or respirable particulate mass are used, the exposure limits listed in the table below are expressed in terms of "total particulate matter".

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short-term exposure Limit, STEL	Ceiling Limit
ABATE (TEMEPHOS), TOTAL	3383-96-8	mg/m ³	10	20	
ACETAMIDE	60-35-5		No BC exposure limit		
ACETAMIPRID, INHALABLE FRACTION & VAPOUR	135410-20-7		No BC exposure limit		
ACETONE CYANOHYDRIN	75-86-5	ppm			1
ACETYLSALICYLIC ACID (ASPIRIN)	50-78-2	mg/m ³	5		
ALDICARB	116-06-3		No BC exposure limit		
ALLYL AMINE	107-11-9	ppm	2		
ALLYL BROMIDE	106-95-6		No BC exposure limit		
ALLYL METHACRYLATE	96-05-9		No BC exposure limit		
ANTIMONY HYDRIDE (STIBINE)	7803-52-3	ppm	0.1		

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short- term exposure Limit, STEL	Ceiling Limit
ANTIMONY TRIOXIDE, INHALABLE	1309-64-4		No BC exposure limit		
ANTIMONY TRIOXIDE - PRODUCTION	1309-64-4		(L)		
ATRAZINE	1912-24-9	mg/m ³	5		
BENDIOCARB	22781-23-3		No BC exposure limit		
BENSULIDE, INHALABLE FRACTION & VAPOUR	741-58-2		No BC exposure limit		
BENZENE	71-43-2	ppm	0.5	2.5	
BENZOIC ACID and ALKALI BENZOATES					
BENZOIC ACID, INHALABLE FRACTION & VAPOUR	65-85-0		No BC exposure limit		
SODIUM BENZOATE, as BENZOATE, INHALABLE	532-32-1		No BC exposure limit		
POTASSIUM BENZOATE, as BENZOATE, INHALABLE	582-25-2		No BC exposure limit		
1,4-BENZOQUINONE	106-51-4	ppm	0.1		
BENZYL CHLORIDE	100-44-7	ppm			1
BORON TRIBROMIDE	10294-33-4	ppm			1
BORON TRICHLORIDE	10294-34-5	ppm	No BC exposure limit		
BORON TRIFLUORIDE	7637-07-2	ppm	0.1		1
BORON TRIFLUORIDE ETHERS, as BF ₃	109-63-7; 353-42-4	ppm	0.1		
BROMOCHLOROMETHANE	74-97-5	ppm	200	250	
BUPROFEZIN, INHALABLE FRACTION & VAPOUR	69327-76-0		No BC exposure limit		
BUTENES, ALL ISOMERS, INCLUDING ISOBUTENE	106-98-9; 107-01-7; 590-18-1; 624-64-6; 25167-67-3; 115-11-7		No BC exposure limit		
n-BUTYL ALCOHOL (n-BUTANOL)	71-36-3	ppm	15		30
tert-BUTYL HYDROPEROXIDE	75-91-2		No BC exposure limit		
n-BUTYL METHACRYLATE	97-88-1	ppm	50		
4-tert-BUTYLBENZOIC ACID	98-73-7		No BC exposure limit		
CADUSAFOS	95465-99-9		No BC exposure limit		
CALCIUM CARBONATE (incl. LIMESTONE, MARBLE), TOTAL	1317-65-3	mg/m ³	10	20	
CALCIUM CHROMATE, as Cr, TOTAL	13765-19-0	mg/m ³	0.001		
CAPROLACTAM DUST	105-60-2	mg/m ³	1	3	
CAPTAFOL	2425-06-1	mg/m ³	0.1		
CAPTAFOL, INHALABLE FRACTION & VAPOUR	2425-06-1		No BC exposure limit		
CARBARYL	63-25-2	mg/m ³	5		
CARBON DIOXIDE	124-38-9	ppm	5000	15,000	
CARBON DISULFIDE	75-15-0	ppm	4	12	
CARBON MONOXIDE	630-08-0	ppm	25	100	
CARBON TETRACHLORIDE	56-23-5	ppm	2		
CARFENTRAZONE-ETHYL	128639-02-1		No BC exposure limit		
CHLORDANE	57-74-9	mg/m ³	0.5		
CHLORDANE, INHALABLE FRACTION & VAPOUR	57-74-9	mg/m ³	No BC exposure limit		

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short- term exposure Limit, STEL	Ceiling Limit
CHLORINE	7782-50-5	ppm	0.1	1	
CHLORINE DIOXIDE	10049-04-4	ppm	0.1	0.3	
CHLOROACETIC ACID	79-11-8	ppm	0.3		
o-CHLOROBENZYLIDENE MALONONITRILE	2698-41-1	ppm			0.05
CHLOROBROMOMETHANE (see BROMOCHLOROMETHANE)	74-97-5		(See individual exposure limits for BROMOCHLOROMETHANE)		
1-CHLORO-1,1-DIFLUOROETHANE	75-68-3	ppm	1000		
CHLORODIFLUOROMETHANE	75-45-6	ppm	500	1250	
CHLOROFORM	67-66-3	ppm	2		
β-CHLOROPRENE	126-99-8	ppm	10		
CHLOROTRIFLUOROMETHANE	75-72-9	ppm	1000		
CHROMIUM and INORGANIC COMPOUNDS:					
METALLIC CHROMIUM, as Cr(0), TOTAL	7440-47-3	mg/m ³	0.5		
METALLIC CHROMIUM, as Cr(0), INHALABLE	7440-47-3		No BC exposure limit		
TRIVALENT CHROMIUM COMPOUNDS, as Cr(III), TOTAL	7440-47-3	mg/m ³	0.5		
TRIVALENT CHROMIUM COMPOUNDS, as Cr(III), INHALABLE	7440-47-3		No BC exposure limit		
HEXVALENT CHROMIUM COMPOUNDS, as Cr(VI), TOTAL, INSOLUBLE	7440-47-3	mg/m ³	0.01		
HEXVALENT CHROMIUM COMPOUNDS, as Cr(VI), TOTAL, WATER-SOLUBLE	7440-47-3	mg/m ³	0.025		0.1
HEXVALENT CHROMIUM COMPOUNDS, as Cr(VI), INHALABLE	7440-47-3		No BC exposure limit		
CHROMYL CHLORIDE, as Cr(VI), TOTAL	14977-61-8	ppm	0.025		
CHROMYL CHLORIDE, as Cr(VI), INHALABLE FRACTION & VAPOUR	14977-61-8		No BC exposure limit		
CHROMITE ORE PROCESSING			(See BC exposure limits for: TRIVALENT CHROMIUM COMPOUNDS, as Cr(III), TOTAL; and HEXVALENT CHROMIUM COMPOUNDS, as Cr(VI), TOTAL)		
CITRAL, INHALABLE	5292-40-5		No BC exposure limit		
CLOPIDOL	2971-90-6	mg/m ³	10		
CLOTHIANIDIN, INHALABLE	210880-92-5		No BC exposure limit		
COBALT and INORGANIC COMPOUNDS, as Co, TOTAL	7440-48-4	mg/m ³	0.02		
COBALT and INORGANIC COMPOUNDS, as Co, INHALABLE	7440-48-4		No BC exposure limit		
CRESOL, ALL ISOMERS	1319-77-3; 95-48-7; 108-39-4; 106-44-5	mg/m ³	10		
CUMENE	98-82-8	ppm	25	75	
CYANAZINE	21725-46-2		No BC exposure limit		
CYANOACRYLATES, ETHYL and METHYL	7085-85-0; 137-05-3	ppm	0.2		
CYANOGEN	460-19-5	ppm	10		

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short- term exposure Limit, STEL	Ceiling Limit
CYANOGEN BROMIDE	506-68-3		No BC exposure limit		
CYCLOPENTADIENE	542-92-7	ppm	75		
CYCLOPENTANE	287-92-3	ppm	600		
CYROMAZINE, INHALABLE	66215-27-8		No BC exposure limit		
DIBUTYL PHOSPHATE	107-66-4	ppm	1	2	
DICHLOROMETHANE	75-09-2	ppm	25		
DICYCLOHEXYLMETHANE-4,4'-DIISOCYANATE	5124-30-1	ppm	0.005		0.01
DICYCLOPENTADIENE	77-73-6	ppm	5		
DICYCLOPENTADIENE, including CYCLOPENTADIENE	77-73-6; 542-92-7		(See individual exposure limits for CYCLOPENTADIENE and DICYCLOPENTADIENE)		
2,4-DICHLOROPHENOXYACETIC ACID AND ITS ESTERS	94-75-7	mg/m ³	10	20	
DIELDRIN	60-57-1	mg/m ³	0.25		
DIETHANOLAMINE	111-42-2	mg/m ³	2		
DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5		No BC exposure limit		
DI(2-ETHYLHEXYL) PHTHALATE (DEHP)	117-81-7	mg/m ³	5		
N,N-DIETHYLHYDROXYLAMINE	3710-84-7		No BC exposure limit		
DIISOCYANATES, N.O.S.		ppm	0.005		0.01
DIMETHOXYMETHANE	109-87-5	ppm	1000	1250	
DIMETHYL ETHER	115-10-6	ppm	1000		
DIMETHYL SULFATE	77-78-1	ppm			0.1
DIMETHYLPHENOL, ALL ISOMERS	95-65-8; 95-87-4; 105-67-9; 108-68-9; 526-75-0; 576-26-1; 1300-71-6		No BC exposure limit		
DINITROBENZENE, ALL ISOMERS	99-65-0; 100-25-4; 528-29-0; 25154-54-5	ppm	0.15		
DINITRO-O-CRESOL	534-52-1	mg/m ³	0.2		
n-DIOCTYL PHTHALATE	117-84-0	mg/m ³	5		
DIPROPYLENE GLYCOL METHYL ETHER	34590-94-8	ppm	100	150	
DIPROPYLENE GLYCOL METHYL ETHER (DPGME)	13429-07-7; 13588-28-8; 20324-32-7; 34590-94-8; 55956-21-3		No BC exposure limit		
DIVINYLBENZENE-ETHYLSTYRENE MIXTURE, as TOTAL DIVINYLBENZENE ISOMERS	69011-19-4; 7525-62-4; 108-57-6; 105-06-6		No BC exposure limit		
ENDOSULFAN	115-29-7	mg/m ³	0.1		
ENFLURANE	13838-16-9	ppm	2		

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short- term exposure Limit, STEL	Ceiling Limit
EPN, INHALABLE	2104-64-5	mg/m ³	0.1		
EPN, INHALABLE FRACTION & VAPOUR	2104-64-5		No BC exposure limit		
ETHYL ACETATE	141-78-6	ppm	150		
ETHYL METHACRYLATE	97-63-2	ppm	50		
ETHYLENE DIBROMIDE	106-93-4	ppm	0.5		
ETHYLENE DICHLORIDE (1,2-DICHLOROETHANE)	107-06-2	ppm	1	2	
ETHYLENE GLYCOL, TOTAL, AEROSOL ONLY	107-21-1	mg/m ³	10	20	100
ETHYLENE GLYCOL, INHALABLE, AEROSOL ONLY	107-21-1		No BC exposure limit		
ETHYLENE GLYCOL, VAPOUR	107-21-1	ppm			50
ETHYLENE GLYCOL DIMETHYL ETHER	110-71-4		No BC exposure limit		
ETHYLENE GLYCOL DINITRATE (EGDN)	628-96-6	ppm	0.05		
ETHYLENEIMINE	151-56-4	ppm	0.5		
2-ETHYL-1-HEXANOL	104-76-7		No BC exposure limit		
ETHYLENE OXIDE	75-21-8	ppm	0.1	1	
ETHYLIDENE NORBORNENE	16219-75-3	ppm			5
FENOXYCARB, INHALABLE	72490-01-8		No BC exposure limit		
FENTANYL and FENTANYL CITRATE, as FENTANYL, INHALABLE	437-38-7; 990-73-8		No BC exposure limit		
FLUDIOXONIL	131341-86-1		No BC exposure limit		
FLUORINE	7782-41-4	ppm	0.1		
FLUORINE, as F	7782-41-4	ppm	(See individual exposure limit for FLUORINE)		
FLUOROXENE	406-90-6	ppm	2		
FOLPET	133-07-3		No BC exposure limit		
FORMAMIDE	75-12-7	ppm	10		
FORMIC ACID	64-18-6	ppm	5	10	
FURFURYL ALCOHOL	98-00-0	ppm	5	10	
GLYCERIN MIST, TOTAL	56-81-5	mg/m ³	10		
GLYCERIN MIST, RESPIRABLE	56-81-5	mg/m ³	3		
GLYCIDYL METHACRYLATE	106-91-2		No BC exposure limit		
GLYPHOSATE, INHALABLE	1071-83-6		No BC exposure limit		
GYPSUM, TOTAL	13397-24-5	mg/m ³	10	20	
HALOTHANE	151-67-7	ppm	2		
HEXAMETHYLENE DIISOCYANATE	822-06-0	ppm	0.005		0.01
HEXAMETHYLENETETRAMINE, INHALABLE FRACTION & VAPOUR	100-97-0		No BC exposure limit		
n-HEXANE	110-54-3	ppm	20		
HEXANE, ALL ISOMERS except n-HEXANE	75-83-2; 79-29-8; 96-14-0; 107-83-5	ppm	200		
HEXANE (COMMERCIAL, <54% n-HEXANE) and the BRANCHED HEXANE ISOMERS	64742-49-0; 64742-89-8; 75-83-2; 79-29-8;		(See individual exposure limits for n-HEXANE; and for HEXANE, ALL ISOMERS except n-HEXANE)		

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short-term exposure Limit, STEL	Ceiling Limit
	107-83-5; 96-14-0				
HEXAZINONE	51235-04-2		No BC exposure limit		
sec-HEXYL ACETATE	108-84-9	ppm	50		
HEXYLENE GLYCOL	107-41-5	ppm			25
HEXYLENE GLYCOL, INHALABLE, AEROSOL ONLY	107-41-5		No BC exposure limit		
HEXYLENE GLYCOL, VAPOUR	107-41-5		No BC exposure limit		
HYDROGEN FLUORIDE, as F	7664-39-3	ppm			2
HYDROGEN SULFIDE	7783-06-4	ppm			10
IMAZOSULFURON, INHALABLE	122548-33-8		No BC exposure limit		
INDENE	95-13-6	ppm	10		
INDIUM TIN OXIDE, as In	50926-11-9		No BC exposure limit		
IODIDES			No BC exposure limit		
IODINE	7553-56-2	ppm			0.1
IODINE and IODIDES					
IODINE, as I, INHALABLE FRACTION & VAPOUR	7553-56-2		No BC exposure limit		
IODIDES, as I, INHALABLE			No BC exposure limit		
IODOFORM	75-47-8	ppm	0.6		
IODOFORM, as ELEMENTAL IODINE, INHALABLE FRACTION & VAPOUR	75-47-8		No BC exposure limit		
IRON OXIDE, FUME	1309-37-1	mg/m ³	5	10	
IRON PENTACARBONYL	13463-40-6	ppm	0.01		
IRON SALTS, SOLUBLE, as Fe		mg/m ³	1	2	
ISOBUTYL NITRITE, INHALABLE FRACTION & VAPOUR	542-56-3	ppm			1
ISOFLURANE	26675-46-7		No BC exposure limit		
ISOPHORONE DIISOCYANATE	4098-71-9	ppm	0.005		0.01
ISOPROPYLAMINE	75-31-0	ppm	5	10	
ISOPROPYL GLYCIDYL ETHER (IGE)	4016-14-2	ppm			50
KETENE	463-51-4	ppm	0.5	1.5	
LEAD CHROMATE, as Cr(VI), TOTAL	7758-97-6		(See BC exposure limits for: HEXVALENT CHROMIUM COMPOUNDS, as Cr(VI), TOTAL)		
LEAD CHROMATE, as Cr(VI), INHALABLE	7758-97-6		No BC exposure limit		
LITHIUM HYDRIDE	7580-67-8	mg/m ³	0.025		
LITHIUM HYDROXIDE	1310-65-2	mg/m ³			1
MAGNESIUM OXIDE, RESPIRABLE DUST AND FUME, as Mg	1309-48-4	mg/m ³	3	10	
MALEIC ANHYDRIDE	108-31-6	ppm	0.1		
MANGANESE, ELEMENTAL AND INORGANIC COMPOUNDS, as Mn, TOTAL	7439-96-5	mg/m ³	0.2		
MANGANESE, ELEMENTAL AND INORGANIC COMPOUNDS, as Mn, INHALABLE	7439-96-5		No BC exposure limit		
MANGANESE, ELEMENTAL AND INORGANIC COMPOUNDS, as Mn, RESPIRABLE	7439-96-5	mg/m ³	0.02		
MERCURY, ARYL COMPOUNDS	7439-97-6	mg/m ³	0.05		0.1

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short-term exposure Limit, STEL	Ceiling Limit
MESITYL OXIDE	141-79-7	ppm	10	25	
METHOMYL	16752-77-5	mg/m ³	2.5		
METHOXYFLURANE	76-38-0	ppm	2		
2-METHOXY-1-PROPANOL	1589-47-5	ppm	20	40	
1-METHOXYPROPYL-2-ACETATE	108-65-6	ppm	50	75	
2-METHOXYPROPYL-1-ACETATE	70657-70-4	ppm	20	40	
2-METHYL-2-BUTENE	513-35-9		No BC exposure limit		
METHYLCYCLOHEXANE	108-87-2	ppm	400		
o-METHYLCYCLOHEXANONE	583-60-8	ppm	50	75	
METHYLCYCLOHEXANONE, ALL ISOMERS	591-24-2; 589-92-4; 1331-22-2		No BC exposure limit		
METHYLENE BISPHENYL ISOCYANATE	101-68-8	ppm	0.005		0.01
METHYLENE bis (4-CYCLOHEXYL-ISOCYANATE)	5124-30-1	ppm	0.005		0.01
4,4'-METHYLENE BIS(2-CHLOROANILINE)	101-14-4	ppm	0.01		
4,4'-METHYLENEDIANILINE	101-77-9	ppm	0.01		
METHYL ETHYL KETONE (MEK)	78-93-3	ppm	50	100	
1-METHYL NAPHTHALENE	90-12-0	ppm	0.5		
2-METHYL NAPHTHALENE	91-57-6	ppm	0.5		
METHYLNAPHTHALENE, ALL ISOMERS	90-12-0; 91-57-6; 1321-94-4		(See BC exposure limits for: 1-METHYL NAPHTHALENE and 2-METHYL NAPHTHALENE)		
METHYL PARATHION	298-00-0	mg/m ³	0.2		
METHYL PROPYL KETONE (2-PENTANONE)	107-87-9	ppm	150	250	
METHYLTETRAHYDROPHthalic ANHYDRIDE ISOMERS	3425-89-6; 5333-84-6; 11070-44-3; 19438-63-2; 19438-64-3; 26590-20-5; 42498-58-8		No BC exposure limit		
METHYL VINYL KETONE	78-94-4	ppm			0.2
MICA, RESPIRABLE	12001-26-2	mg/m ³	3		
MONOMETHYLFORMAMIDE	123-39-7		No BC exposure limit		
1,5-NAPHTHYLENE DIISOCYANATE	3173-72-6	ppm	0.005		0.01
NATURAL RUBBER LATEX, AS TOTAL PROTEINS, INHALABLE	9006-04-6	mg/m ³	0.001		
NICKEL, ELEMENTAL, SOLUBLE INORGANIC COMPOUNDS (NOS)	7440-02-0	mg/m ³	0.05		
NICKEL, INSOLUBLE INORGANIC COMPOUNDS (NOS)	7440-02-0	mg/m ³	0.05		
NICKEL CARBONYL, as Ni	13463-39-3	ppm	0.001		0.05
NITRAPYRIN	1929-82-4	mg/m ³	10 (N)	20	
NITRAPYRIN, INHALABLE FRACTION & VAPOUR	1929-82-4		No BC exposure limit		
NITROGEN DIOXIDE	10102-44-0	ppm			1
5-NITRO-O-TOLUIDINE, INHALABLE	99-55-8	mg/m ³	1		

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short- term exposure Limit, STEL	Ceiling Limit
5-NITRO-O-TOLUIDINE, INHALABLE FRACTION & VAPOUR	99-55-8		No BC exposure limit		
2-NITROPROPANE	79-46-9	ppm	5		
NITROUS OXIDE	10024-97-2	ppm	25		
OIL MIST, MINERAL, MILDLY REFINED		mg/m ³	0.2		
OIL MIST, MINERAL, SEVERELY REFINED		mg/m ³	1		
PARAQUAT, as the cation, INHALABLE	4685-14-7		No BC exposure limit		
PARAQUAT, as the cation, RESPIRABLE	4685-14-7	mg/m ³	0.1		
PARAQUAT, as the cation, TOTAL	4685-14-7	mg/m ³	0.5		
PENTABORANE	19624-22-7	ppm	0.005	0.015	
PENTACHLORONAPHTHALENE	1321-64-8	mg/m ³	0.5		
PENTACHLORONAPHTHALENE, INHALABLE FRACTION & VAPOUR	1321-64-8		No BC exposure limit		
PENTACHLOROPHENOL	87-86-5	mg/m ³	0.5		
2,4-PENTANEDIONE	123-54-6		No BC exposure limit		
PERACETIC ACID	79-21-0		No BC exposure limit		
PERCHLORYL FLUORIDE	7616-94-6	ppm	3	6	
PHENOTHIAZINE	92-84-2	mg/m ³	5		
PHENOTHIAZINE, INHALABLE	92-84-2		No BC exposure limit		
PHENYLETHYL ALCOHOL	60-12-8		No BC exposure limit		
PHENYL MERCAPTAN	108-98-5	ppm			0.1
PHOSGENE	75-44-5	ppm	0.1		
PHOSPHINE	7803-51-2	ppm	0.3	1	
o-PHTHALALDEHYDE	643-79-8		No BC exposure limit		
PHTHALIC ANHYDRIDE	85-44-9	ppm	1		
PHTHALIC ANHYDRIDE, INHALABLE FRACTION & VAPOUR	85-44-9		No BC exposure limit		
o-PHTHALODINITRILE	91-15-6		No BC exposure limit		
PIPERAZINE AND ITS SALTS, as PIPERAZINE	110-85-0	mg/m ³	0.3	1	
PIPERIDINE	110-89-4	ppm	1		
PLASTER OF PARIS, TOTAL	26499-65-0	mg/m ³	10	20	
PROMETON, INHALABLE	1610-18-0		No BC exposure limit		
PROMETRYN, INHALABLE	7287-19-6		No BC exposure limit		
PROPOXUR	114-26-1	mg/m ³	0.5		
PROPYLENE GLYCOL DINITRATE	6423-43-4	ppm	0.05		
PROPYLENE GLYCOL ETHYL ETHER	1569-02-4		No BC exposure limit		
PROPYLENEIMINE	75-55-8	ppm	2		
n-PROPYL NITRATE	627-13-4	ppm	25	40	
RESIN ACIDS, as TOTAL RESIN ACIDS	8050-09-7		No BC exposure limit		
ROSIN CORE SOLDER THERMAL DECOMPOSITION PRODUCTS (COLOPHONY)	8050-09-7		(L)		

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short-term exposure Limit, STEL	Ceiling Limit
RHODIUM, METAL AND INSOLUBLE COMPOUNDS, as Rh	7440-16-6	mg/m ³	0.1	0.3	
RHODIUM, SOLUBLE COMPOUNDS, as Rh	7440-16-6	mg/m ³	0.001	0.003	
SELENIUM AND COMPOUNDS, as Se	7782-49-2	mg/m ³	0.1		
SEVOFLURANE	28523-86-6		No BC exposure limit		
SILICA, AMORPHOUS:					
DIATOMACEOUS EARTH, UNCALCINED, TOTAL	61790-53-2	mg/m ³	4		
DIATOMACEOUS EARTH, UNCALCINED, RESPIRABLE	61790-53-2	mg/m ³	1.5		
PRECIPITATED SILICA and SILICA GEL, TOTAL	112926-00-8	mg/m ³	4		
PRECIPITATED SILICA and SILICA GEL, RESPIRABLE	112926-00-8	mg/m ³	1.5		
SILICA FUME, TOTAL	69012-64-2	mg/m ³	4		
SILICA FUME, RESPIRABLE	69012-64-2	mg/m ³	1.5		
SILICON CARBIDE	409-21-2				
NONFIBROUS PARTICLES (CONTAINING <0.1% CRYSTALLINE SILICA), INHALABLE	409-21-2		No BC exposure limit		
NONFIBROUS PARTICLES (CONTAINING NO ASBESTOS and <1% CRYSTALLINE SILICA), INHALABLE	409-21-2	mg/m ³	10 (E)		
NONFIBROUS PARTICLES (CONTAINING <0.1% CRYSTALLINE SILICA), RESPIRABLE	409-21-2		No BC exposure limit		
NONFIBROUS PARTICLES (CONTAINING NO ASBESTOS and <1% CRYSTALLINE SILICA), RESPIRABLE	409-21-2	mg/m ³	3 (E)		
FIBROUS FORMS (INCLUDING WHISKERS), RESPIRABLE FIBRES	409-21-2	f/cc	0.1		
SILICON TETRAHYDRIDE (SILANE)	7803-62-5	ppm	0.5	1	
SILVER AND COMPOUNDS, as Ag	7440-22-4	mg/m ³	0.01	0.03	
SIMAZINE	122-34-9		No BC exposure limit		
STODDARD SOLVENT (MINERAL SPIRITS)	8052-41-3	mg/m ³	290	580	
STRONTIUM CHROMATE, as Cr, TOTAL	7789-06-2	mg/m ³	0.0005		
STYRENE	100-42-5	ppm	20	40	
STYRENE OXIDE	96-09-3	ppm	No BC exposure limit		
SULFOMETURON METHYL	74222-97-2	mg/m ³	5		
SULFOMETURON METHYL, INHALABLE FRACTION & VAPOUR	74222-97-2		No BC exposure limit		
SULFOXAFLOX	946578-00-3		No BC exposure limit		
SULFUR DIOXIDE	7446-09-5	ppm	2	5	
SULFUR PENTAFLUORIDE	5714-22-7	ppm			0.01
SULPROFOS	35400-43-2	mg/m ³	1		
TANTALUM and TANTALUM OXIDE dusts, as Ta	7440-25-7	mg/m ³	5		
TEMEPHOS, TOTAL	3383-96-8		(See individual exposure limits for ABATE (TEMEPHOS), TOTAL)		
1,1,2,2-TETRABROMOETHANE, INHALABLE FRACTION & VAPOUR	79-27-6	ppm	0.1		

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short-term exposure Limit, STEL	Ceiling Limit
1,1,1,2-TETRACHLORO-2,2-DIFLUOROETHANE	76-11-9	ppm	500		
1,1,2,2-TETRACHLORO-1,2-DIFLUOROETHANE	76-12-0	ppm	200		
TETRACHLORVINPHOS, INHALABLE	22248-79-9; 22350-76-1; 961-11-5		No BC exposure limit		
TETRAETHYL LEAD, as Pb	78-00-2	mg/m ³	0.075		
TETRAMETHYL LEAD, as Pb	75-74-1	mg/m ³	0.075		
TETRAMETHYL SUCCINONITRILE	3333-52-6	ppm	0.5		
THIACLOPRID	111988-49-9		No BC exposure limit		
THIODICARB	59669-26-0		No BC exposure limit		
THIOGLYCOLIC ACID	68-11-1	ppm	1		
THIOGLYCOLIC ACID and salts	68-11-1		No BC exposure limit		
THIONYL CHLORIDE	7719-09-7	ppm			1
THIRAM	137-26-8	mg/m ³	1		
TIN and INORGANIC COMPOUNDS, excluding TIN HYDRIDE and INDIUM TIN OXIDE, as Sn	7440-31-5; 18282-10-5; 21651-19-4		(See individual exposure limits for TIN and INORGANIC COMPOUNDS, excluding TIN HYDRIDE, as Sn, METAL; and for TIN and INORGANIC COMPOUNDS, excluding TIN HYDRIDE, as Sn, OXIDE and INORGANIC COMPOUNDS)		
TIN and INORGANIC COMPOUNDS, excluding TIN HYDRIDE, as Sn, METAL	7440-31-5	mg/m ³	2		
TIN and INORGANIC COMPOUNDS, excluding TIN HYDRIDE, as Sn, OXIDE and INORGANIC COMPOUNDS	7440-31-5	mg/m ³	2		
TITANIUM DIOXIDE	13463-67-7	mg/m ³	10 (N)		
TITANIUM DIOXIDE, FINESCALE PARTICLES, RESPIRABLE	13463-67-7		No BC exposure limit		
TITANIUM DIOXIDE, NANOSCALE PARTICLES, RESPIRABLE	13463-67-7		No BC exposure limit		
TITANIUM TETRACHLORIDE, as HCl	7550-45-0		No BC exposure limit		
2,4-TOLUENE DIISOCYANATE (TDI)	584-84-9	ppm	0.005		0.01
2,6-TOLUENE DIISOCYANATE (TDI)	91-08-7	ppm	0.005		0.01
2,4- and 2,6-TOLUENE DIISOCYANATE AS A MIXTURE	584-84-9; 91-08-7		No BC exposure limit (see section 5.51, OHSR)		
TRIBUTYL PHOSPHATE	126-73-8	ppm	0.2		
TRICHLORFON, INHALABLE FRACTION & VAPOUR	52-68-6		No BC exposure limit		
1,2,3-TRICHLOROPROPANE	96-18-4	ppm	10		
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	ppm	500	1250	
TRICLOSAN	3380-34-5		No BC exposure limit		
TRIFLUMIZOLE, INHALABLE	68694-11-1		No BC exposure limit		
TRIMELLITIC ANHYDRIDE	552-30-7	mg/m ³			0.04
TRIMETHYL BENZENE (MIXED ISOMERS)	25551-13-7	ppm	25		
TRIMETHYL BENZENE, ISOMERS	25551-13-7; 526-73-8; 95-63-6; 108-67-8		No BC exposure limit		
TRIMETHYL HEXAMETHYLENE DIISOCYANATE	28679-16-5	ppm	0.005		0.01

Substance/Chemical Name	CAS No.	Unit	8-hour TWA Limit	Short-term exposure Limit, STEL	Ceiling Limit
2,4,6-TRINITROTOLUENE (TNT), TOTAL	118-96-7	mg/m ³	0.1		
2,4,6-TRINITROTOLUENE (TNT), INHALABLE FRACTION & VAPOUR	118-96-7		No BC exposure limit		
TRIORTHOCRESYL PHOSPHATE	78-30-8	mg/m ³	0.1		
TRI-n-BUTYL TIN COMPOUNDS	688-73-3	mg/m ³	0.05		
URANIUM COMPOUNDS, NATURAL, SOLUBLE, as U	7440-61-1	mg/m ³	0.05		
VEGETABLE OIL MIST, RESPIRABLE FRACTION, EXCEPT CASTOR, CASHEW NUT, OR SIMILAR IRRITATING OILS	8008-89-7	mg/m ³	3		
VINYLDENE CHLORIDE	75-35-4	ppm	1		
VINYL TOLUENE, ALL ISOMERS	25013-15-4	ppm	25	75	
VINYLTOLUENE, ALL ISOMERS	611-15-4; 100-80-1; 622-97-9; 25013-15-4		No BC exposure limit		
WARFARIN	81-81-2	mg/m ³	0.1		
WOOD DUST:					
ALLERGENIC		mg/m ³	1		
NON-ALLERGENIC, HARDWOOD		mg/m ³	1		
NON-ALLERGENIC, SOFTWOOD		mg/m ³	2.5		
XYLENE (o, m & p ISOMERS)	1330-20-7; 95-47-6; 108-38-3; 106-42-3	ppm	100	150	
XYLENE, ALL ISOMERS	1330-20-7; 95-47-6; 106-42-3; 108-38-3		No BC exposure limit		
m-XYLENE ALPHA, ALPHA' -DIAMINE	1477-55-0	mg/m ³			0.1
ZINC CHROMATES, as Cr, TOTAL	11103-86-9; 13530-65-9; 37300-23-5	mg/m ³	0.01		

(E) = the value is for particulate matter containing no asbestos and less than 1% crystalline silica

(N) = the 8-hour TWA listed in the Table is for the total dust. The substance also has an 8-hour TWA of 3 mg/m³ for the respirable fraction

(L) = exposure by all routes should be carefully controlled to levels as low as possible

2. Dusts

The Board categorizes particulates that are insoluble or poorly soluble in water and do not cause toxic effects other than by inflammation or the mechanism of "lung overload", as "nuisance dusts".

A "nuisance dust" will have an exposure limit or TLV of 10 mg/m³ for total particulate. It is recognized that the respirable fraction of "nuisance dusts" may also be measured. The equivalent exposure limit for respirable particulate is 3 mg/m³. Respirable particulate refers to the fraction of inhaled dust that is capable of passing through the

upper respiratory tract to the gas exchange region of the lung. Total particulate refers to a wide range of particle sizes capable of being deposited in the various regions of the respiratory tract.

PRACTICE

For any relevant PRACTICE information, readers should consult the associated OHS Guidelines available on the WorkSafeBC website at www.worksafebc.com. The B.C. exposure limits are also available on WorkSafeBC's E-Limit tool on the WorkSafeBC website at <https://elimit.online.worksafebc.com/>.

EFFECTIVE DATE:	April 11, 2024
AUTHORITY:	Section 5.48 of the <i>OHSR</i> .
CROSS REFERENCES:	
HISTORY:	History notes for this policy can be found on the WorkSafeBC Exposure Limit website at https://www.worksafebc.com/en/law-policy/occupational-health-safety/regulating-chemical-exposure
APPLICATION:	Each amendment of this policy applies to incidents occurring on and after the effective date of the amendment. If a decision made before the amendment effective date is within the appeal period, at Review Division, or at WCAT, it remains subject to the policy in effect at the time of the incident.

