

**PROPOSED CHANGES TO OCCUPATIONAL EXPOSURE LIMITS AND/OR LISTINGS FOR SUBSTANCES REGULATED UNDER
REGULATION 833, CONTROL OF EXPOSURE TO BIOLOGICAL OR CHEMICAL AGENTS
BASED ON 2018 ACGIH RECOMMENDATIONS**

Substance	Current TWA	Current STEL / C	Proposed Substance Listing	Proposed TWA	Proposed STEL /C	Change
Aldicarb [116-06-3]	No listing	No listing	Aldicarb [116-06-3]- Skin	0.005 mg/m ³ (IFV)	-	Addition of substance to regulation.
Allyl methacrylate [96-05-9]	No listing	No listing	Allyl methacrylate [96-05-9]- Skin	1 ppm	-	Addition of substance to regulation.
Bendiocarb [22781-23-3]	No listing	No listing	Bendiocarb [22781-23-3]	0.1 mg/m ³ (IFV)	-	Addition of substance to regulation.
Boron trifluoride ethers [109-63-7; 353-42-4], as BF ₃	No listing	No listing	Boron trifluoride ethers [109-63-7; 353-42-4], as BF ₃	0.1 ppm	C 0.7 ppm	Addition of substance to regulation.
tert-Butyl hydroperoxide [75-91-2]	No listing	No listing	tert-Butyl hydroperoxide [75-91-2]- Skin	0.1 ppm	-	Addition of substance to regulation.
Calcium chromate [13765-19-0], as Cr	0.001 mg/m ³	-	Separate listing and TWA withdrawn.	-	-	Listing and TWA withdrawn. See proposed listing for Chromium [7440-47-3] and inorganic compounds.
Carfentrazone-ethyl [128639-02-1]	No listing	No listing	Carfentrazone-ethyl [128639-02-1]	1 mg/m ³ (I)	-	Addition of substance to regulation.
Chlorine [7782-50-5]	0.5 ppm	1.0 ppm	Chlorine [7782-50-5]	0.1 ppm	0.4 ppm	TWA reduced. STEL reduced.
Chlorine dioxide [10049-04-4]	0.1 ppm	0.3 ppm	Chlorine dioxide [10049-04-4]	-	C 0.1 ppm	TWA and STEL withdrawn. C added.

Chromite ore processing (Chromate), as Cr	0.05 mg/m ³	-	Separate listing withdrawn.	-	-	See proposed listing for Chromium [7440-47-3] and inorganic compounds.
Chromium [7440-47-3] and inorganic compounds, as Cr	-	-	Chromium [7440-47-3] and inorganic compounds	-	-	-
- Metal and Cr III compounds	0.5 mg/m ³	-	- Metallic chromium, as Cr (0) - Trivalent chromium compounds, as Cr (III) (water-soluble compounds)	0.5 mg/m ³ ⁽¹⁾ 0.003 mg/m ³ ⁽¹⁾	- -	Change to listings. TWA developed for inhalable particulate matter for metallic chromium and water-soluble trivalent chromium compounds.
- Water-soluble Cr VI compounds	0.05 mg/m ³	-	- Hexavalent chromium compounds, as Cr (VI) (water-soluble compounds) - Skin	0.0002 mg/m ³ ⁽¹⁾	0.0005 mg/m ³ ⁽¹⁾	Change to listing. TWA developed for inhalable particulate matter for water-soluble hexavalent chromium compounds. STEL added. Skin notation added.
- Insoluble Cr VI Compounds	0.01 mg/m ³	-	Listing withdrawn.	-	-	Listing and OELs withdrawn.
-	-	-	- Chromyl chloride [14977-61-8], as Cr (VI)	0.0001 ppm ⁽¹⁾	0.00025 ppm ⁽¹⁾	Change to listing. TWA developed for inhalable particulate matter. STEL added.
-	-	-	- Chromite ore processing	See Hexavalent and Trivalent Chromium Compounds	See Hexavalent and Trivalent Chromium Compounds	Change to listing and OELs.
	0.025 ppm	-	Separate listing withdrawn.	-	-	

Chromyl chloride [14977-61-8]						See proposed listing for Chromium [7440-47-3] and inorganic compounds.
Cyanoacrylates, Ethyl [7085-85-0] and Methyl [137-05-3]	No listing.	No listing	Cyanoacrylates, Ethyl [7085-85-0] and Methyl [137-05-3]	0.2 ppm	1 ppm	Separate listings for ethyl and methyl cyanoacrylates combined. STEL added.
N, N- Dimethyl acetamide [127-19-5] - Skin	10 ppm	-	Dimethylacetamide [127-19-5] - Skin	10 ppm	-	Change in listing.
Dimethylformamide [68-12-2] - Skin	10 ppm	-	Dimethylformamide [68-12-2] - Skin	5 ppm	-	TWA reduced.
Ethyl cyanoacrylate [7085-85-0]	0.2 ppm	-	Separate listing and TWA withdrawn.	-	-	See proposed listing for Cyanoacrylates, Ethyl [7085-85-0] and Methyl [137-05-3]
Fludioxonil [131341-86-1]	No Listing	No listing	Fludioxonil [131341-86-1]	1 mg/m ³ ^(l)		Substance added to regulation.
Isopropyl acetate [108-21-4]	100 ppm	200 ppm	Separate listing withdrawn.	-	-	See proposed listing for Propyl acetate isomers [108-21-4; 109-60-4]
Lead chromate [7758-97-6], as Cr	0.012 mg/m ³	-	Lead chromate [7758-97-6], as Cr (VI)	0.0002 mg/m ³ ^(l)	0.0005 mg/m ³ ^(l)	Change in listing. TWA developed for inhalable particulate matter. STEL added.
Methane [74-82-8]	See Appendix F: Minimal Oxygen Content. Note: section 7.1 of Regulation 833 applies.	See Appendix F: Minimal Oxygen Content. Note: section 7.1 of Regulation 833 applies.	Methane [74-82-8]	See Appendix F: Minimal Oxygen Content. (D), (EX) Note: section 7.1 of Regulation 833 applies.	See Appendix F: Minimal Oxygen Content (D), (EX). Note: section 7.1 of Regulation 833 applies.	Addition of notations for simple asphyxiant (D) and explosion hazard (EX).

Methyl 2-cyanoacrylate [137-05-3]	0.2 ppm	-	Separate listing withdrawn.			See proposed listing for Cyanoacrylates, Ethyl [7085-85-0] and Methyl [137-05-3]
Natural gas [8006-14-2]	See Appendix F: Minimal Oxygen Content. Note: section 7.1 of Regulation 833 applies.	See Appendix F: Minimal Oxygen Content. Note: section 7.1 of Regulation 833 applies.	Natural gas [8006-14-2]	See Appendix F: Minimal Oxygen Content (D), (EX). Note: section 7.1 of Regulation 833 applies.	See Appendix F: Minimal Oxygen Content (D), (EX). Note: section 7.1 of Regulation 833 applies.	Addition of notations for simple asphyxiant (D) and explosion hazard (EX).
Paraquat [4685-14-7]	0.1 mg/m ³		Paraquat [4685-14-7], as the cation - Skin	0.05 mg/ m ³ ⁽¹⁾		Change in listing. TWA developed for inhalable particulate matter. Skin notation added.
Phosphine [7803-51-2]	0.3 ppm	1 ppm	Phosphine [7803-51-2]	0.05 ppm	C 0.15 ppm	TWA reduced. STEL withdrawn. C limit added.
<i>n</i> -Propyl acetate [109-60-4]	200 ppm	250 ppm	Separate listing withdrawn.	-	-	See proposed listing for Propyl acetate isomers [108-21-4; 109-60-4]
Propyl acetate isomers [108-21-4; 109-60-4]	No listing	No listing	Propyl acetate isomers [108-21-4; 109-60-4]	100 ppm	150 ppm	Separate listings for propyl acetate isomers combined. TWA for <i>n</i> - Propyl acetate reduced. STEL reduced for Isopropyl acetate and <i>n</i> - Propyl acetate.
Strontium chromate [7789-06-2], as Cr	0.0005 mg/m ³	-	Separate listing withdrawn.	-	-	See proposed listing for Chromium and inorganic compounds [7789-06-2], as Cr
Thioglycolic acid [68-11-1] - Skin	1 ppm	-	Thioglycolic acid [68-11-1] and salts - Skin	1 ppm	-	Change in listing.

Zinc chromates [11103-86-9; 13530-65-9; 37300-23-5], as Cr	0.01 mg/m ³	-	Separate listing withdrawn.	-	-	See proposed listing for Chromium and inorganic compounds [7789-06-2], as Cr
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Endnotes and Abbreviations

TWA or time-weighted average limit means the time-weighted average airborne concentration of a biological or chemical agent to which a worker may be exposed in a work day or work week.

STEL or short-term exposure limit means the maximum airborne concentration of a biological or chemical agent to which a worker may be exposed, (a) in any 15-minute period, (b) no more than four times during an eight-hour work shift, and (c) with at least one hour between exposures

C or ceiling limit means the maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.

(D) Simple asphyxiant.

(E) The value is for particulate matter containing no asbestos and < 1% crystalline silica.

(EX) Explosion hazard: the substance is a flammable asphyxiant or excursions above the occupational exposure limits could approach 10% of the lower explosive limit.

(I) Inhalable particulate matter.

(IFV) Inhalable fraction and vapour