

## COMMON TOXIC GASES AS DEFINED BY THE TOXIC GAS ORDINANCE AND CFC

For Use By All Jurisdictions, Cities and County, Within the Limits of Santa Clara County.

GAS & FORMULA	CAS No./ UN No.	UBC/CFC CLASS <sup>1</sup>	TGO CLASS <sup>2</sup>	IDLH <sup>3</sup>	LC <sub>50</sub> <sup>4</sup>	LOC	MAX TQ	PEL <sup>5</sup>
Ammonia - NH <sub>3</sub>	7664-41-7 UN1005	Corrosive <sup>6,7</sup> Flammable	III	300 ppm	4000 ppm	30 ppm	8000 lbs	50 ppm
Arsine - AsH <sub>3</sub>	7784-42-1 UN2188	Highly Toxic Flammable	I	3 ppm	20 ppm	0.3 ppm	N/A	0.05 ppm
Boron Tribromide - BBr <sub>3</sub>	10294-33-4 UN2692	Toxic WR-2	II	50 ppm	380 ppm	5 ppm	760 lbs	1 ppm ©
Boron Trichloride - BCl <sub>3</sub>	10294-34-5 UN1741	Corrosive <sup>6</sup> WR-1	II	25 ppm <sup>8</sup>	2541 ppm	2.5 ppm	5082 lbs	5 ppm
Boron Trifluoride - BF <sub>3</sub>	7637-07-2 UN1008	Toxic WR-1	II	25 ppm	806 ppm	2.5 ppm	1612 lbs	1 ppm ©
Bromine - Br <sub>2</sub>	7726-95-6 UN1744	Highly Toxic Corrosive Oxidizer	I	3 ppm	113 ppm	0.3 ppm	N/A	0.1 ppm
Carbon Monoxide - CO	630-08-0 UN1016	Flammable <sup>6</sup>	III	1200 ppm	3760 ppm	120 ppm	7520 lbs	50 ppm
Chlorine - Cl <sub>2</sub>	7782-50-5 UN1017	Toxic Corrosive Oxidizer	II	10 ppm	293 ppm	1 ppm	586 lbs	1 ppm ©

- Notes:
1. Class as defined in CFC: 1.) Health Hazards per Article 2; Highly Toxic = < 200 LC<sub>50</sub>, Toxic = 200 - 2,000 LC<sub>50</sub>. 2.) Physical Hazards per UFC Standard 79-3.
  2. TGO Class Defined As: Class I = < 200 LC<sub>50</sub>, Class II = 200 - 3000 LC<sub>50</sub>, Class III = 3001 - 5000 LC<sub>50</sub>
  3. IDLH values published in 1994 by the National Institute for Occupational Safety and Health (NIOSH).
  4. LC<sub>50</sub> data: Lowest reported value, 1 hour adjusted, taken from DOT, CGA, RTECS.
  5. PEL values published by OSHA (29 CFR, part 1910.1000, Table Z-1) dated 7/1/95. OSHA values used if available, otherwise TLV from ACGIH or Cal OSHA values used. © = Ceiling Limit.
  6. Moderately toxic as adopted by the cities of San Jose, Santa Clara, and Milpitas: LC<sub>50</sub> = 2,000 - 5000.
  7. When used as a refrigerant, UBC Class does not apply. See TGO consensus guidelines for additional information regarding ammonia refrigeration systems.
  8. IDLH determined by 0.01 of LC<sub>50</sub>.
  9. Cal OSHA PEL, Title 8, Section 5155, 9/1/95.
  10. Threshold Limit Values (TLV) from the American Conference of Governmental Industrial Hygienists (1994-1995).

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Chlorine Dioxide - ClO <sub>2</sub>	10049-04-4 NA9191	Toxic UR-3 Oxidizer WR-1	II	5 ppm	250 ppm	0.5 ppm	500 lbs	0.1 ppm
Chlorine Trifluoride - ClF <sub>3</sub>	7790-91-2 UN1749	Toxic Oxidizer WR-3	II	20 ppm	299 ppm	2 ppm	598 lbs	0.1 ppm ©
Diborane - B <sub>2</sub> H <sub>6</sub>	19278-45-7 UN1911	Highly Toxic Flammable WR-2	I	15 ppm	80 ppm	1.5 ppm	N/A	0.1 ppm
Dichlorosilane - SiH <sub>2</sub> Cl <sub>2</sub> (HCl)	4109-96-0 UN2189	Toxic Corrosive Flammable	II	50 ppm	314 ppm	5 ppm	628 lbs	5 ppm ©
Ethylene Oxide - C <sub>2</sub> H <sub>4</sub> O	75-21-8 UN1040	Flammable <sup>6</sup> UR-3	III	800 ppm	4350 ppm	80 ppm	8700 lbs	1 ppm
Fluorine - F <sub>2</sub>	7782-41-4 UN1045	Highly Toxic Oxidizer	I	25 ppm	185 ppm	2.5 ppm	N/A	0.1 ppm
Germane - GeH <sub>4</sub>	7782-65-2 UN2192	UR-3 Toxic Flammable	II	6 ppm <sup>8</sup>	622 ppm	0.6 ppm	1244 lbs	0.2 ppm <sup>9</sup>
Hydrogen Bromide - HBr	10035-10-6 UN1048	Corrosive <sup>6</sup>	II	30 ppm	2860 ppm	3 ppm	5720 lbs	3 ppm
Hydrogen Chloride - HCl	7647-01-0 UN1050	Corrosive <sup>6</sup>	II	50 ppm	2810 ppm	5 ppm	5620 lbs	5 ppm ©
Hydrogen Cyanide - HCN	74-90-8 UN1051	Highly Toxic Flammable	I	50 ppm	40 ppm	5 ppm	N/A	10 ppm
Hydrogen Fluoride - HF	7664-39-3 UN1052	Toxic	II	30 ppm	1300 ppm	3 ppm	2600 lbs	3 ppm
Hydrogen Selenide - H <sub>2</sub> Se	7783-07-5 UN2202	Highly Toxic Flammable	I	1 ppm	2 ppm	0.1 ppm	N/A	0.05 ppm
Hydrogen Sulfide - H <sub>2</sub> S	7783-06-4 UN1053	Toxic Flammable	II	100 ppm	712 ppm	10 ppm	1424 lbs	20 ppm
Methyl Bromide - CH <sub>3</sub> Br	74-83-9 UN1062	Toxic Flammable	II	250 ppm	1007 ppm	25 ppm	2014 lbs	20 ppm ©

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Methylisocyanate - CH <sub>3</sub> NCO	624-83-9 UN2480	Highly Toxic Flammable WR-2	I	3 ppm	22 ppm	0.3 ppm	N/A	0.02 ppm
Methyl Mercaptan - CH <sub>3</sub> SH	74-93-1 UN1064	Toxic Flammable	II	150 ppm	1350 ppm	15 ppm	2700 lbs	10 ppm ©
Nickel Carbonyl - Ni(CO) <sub>4</sub>	13463-39-3 UN1259	Highly Tox. UR-3 Flammable WR-1	I	2 ppm	18 ppm	0.2 ppm	N/A	0.001 ppm
Nitric Oxide - NO	10102-43-9 UN1660	Highly Toxic Oxidizer	I	100 ppm	115 ppm	10 ppm	N/A	25 ppm
Nitrogen Dioxide - NO <sub>2</sub>	10102-44-0 UN1067	Highly Toxic Oxidizer WR-1	I	20 ppm	115 ppm	2 ppm	N/A	5 ppm ©
Phosgene - COCl <sub>2</sub>	75-44-5 UN1076	Highly Toxic WR-1	I	2 ppm	5 ppm	0.2 ppm	N/A	0.1 ppm
Phosphine - PH <sub>3</sub>	7803-51-2 UN2199	Highly Toxic Pyrophoric	I	50 ppm	20 ppm	5 ppm	N/A	0.3 ppm
Phosphorus Oxychloride - POCl <sub>3</sub>	10025-87-3 UN1810	Highly Toxic WR-2	I	0.96 ppm <sup>8</sup>	96 ppm	0.096 ppm	N/A	0.1 ppm <sup>8,9</sup>
Phosphorus Pentafluoride - PF <sub>5</sub>	7647-19-0 UN2198	Toxic Oxidizer WR-1	II	2.6 ppm <sup>8</sup>	260 ppm	0.26 ppm	520 lbs	3 ppm
Phosphorus Trichloride - PCl <sub>3</sub>	7719-12-2 UN1809	Toxic UR-2 WR-2 Oxidizer	II	25 ppm	208 ppm	2.5 ppm	416 lbs	0.5 ppm
Selenium Hexafluoride - SeF <sub>6</sub>	7783-79-1 UN2194	Highly Toxic	I	2 ppm	50 ppm	0.2 ppm	N/A	0.05 ppm (as Se)
Silicon Tetrachloride - SiCl <sub>4</sub> (HCl)	10026-04-7 UN1818	Toxic Corrosive	II	50 ppm	750 ppm	5 ppm	1500 lbs	5 ppm ©
Silicon Tetrafluoride - SiF <sub>4</sub> (HF)	7783-61-1 UN1859	Toxic WR-2	II	30 ppm	450 ppm	3 ppm	900 lbs	0.1 ppm
Stibine - SbH <sub>3</sub>	7803-52-3 UN2676	Highly Toxic Flammable	I	5 ppm	20 ppm	0.5 ppm	N/A	0.1 ppm
Sulfur Dioxide - SO <sub>2</sub>	7446-09-5 UN1079	Corrosive <sup>6</sup>	II	100 ppm	2520 ppm	10 ppm	5040 lbs	5 ppm

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Sulfuryl Fluoride - SO <sub>2</sub> F <sub>2</sub>	2699-79-8 UN2191	Corrosive <sup>6</sup>	III	200 ppm	3020 ppm	20 ppm	6040 lbs	5 ppm
Tellurium Hexafluoride - TeF <sub>6</sub>	7783-80-4 UN2195	Highly Toxic	I	1 ppm	25 ppm	0.1 ppm	N/A	0.02 ppm (as Te)
Titanium Tetrachloride - TiCl <sub>4</sub>	7550-45-0 UN1838	Highly Toxic Corrosive WR-2	I	1.3 ppm	119 ppm	0.13 ppm	N/A	
Tungsten Hexafluoride - WF <sub>6</sub> (HF)	7783-82-6 UN2196	Toxic Corrosive WR-2	II	30 ppm	217 ppm	3 ppm	434 lbs	0.1 ppm

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