

### Examples of Toxic and Dangerous Gases

Below is a list of toxic gases that must be stored under continuous ventilation either in a fume hood or ventilated gas cabinet. Purchasing these gases requires Risk Management and Safety (RMS) pre-approval. RMS will verify proper storage, inventory, and hazard control plans.

Gas	CAS	Hazards	Threshold Levels	NFPA Ranking
Ammonia	7664-41-7	Corrosive	TLV:25 ppm PEL:50 ppm IDHL:300 ppm	3
Arsine	7784-42-1	Highly toxic, flammable, pyrophoric	TLV:0.05 ppm PEL:0.05 ppm IDHL:3 ppm	4
Boron Tribromide	10294-33-4	Toxic, corrosive	TLV:1 ppm PEL:1 ppm IDHL:50 ppm	3
Boron Trichloride	10294-34-5	Toxic, corrosive	TLV:5 ppm PEL:5 ppm IDHL:25 ppm	3
Boron Trifluoride	7637-07-2	Toxic, corrosive	TLV:1 ppm PEL:1 ppm IDHL:25 ppm	3
Bromine	7726-95-6	Highly toxic, corrosive, oxidizer	TLV:0.1 ppm PEL:0.1 ppm IDHL:3 ppm	3
Carbon Dioxide	124-38-9	Simple asphyxiant	TLV:5000 ppm PEL:5000 ppm IDHL:40000 ppm	
Carbon Monoxide	630-08-0	Toxic, Flammable	TLV:25 ppm PEL:25 ppm IDHL:1200 ppm	3
Chlorine	7782-50-5	Toxic, corrosive, oxidizer	TLV:0.5ppm PEL:1 ppm IDHL:10 ppm	3
Chlorine Dioxide	10049-04-4	Toxic, Corrosive, Oxidizer	TLV:0.1 ppm PEL:0.1 ppm IDHL:5 ppm	
Chlorine Trifluoride	7790-91-2	Toxic, corrosive, oxidizer	TLV:0.1 ppm PEL:0.1 ppm IDHL:12 ppm	4
Diborane	19278-45-7	Highly toxic, flammable, pyrophoric	TLV:0.1 ppm PEL:0.1 ppm IDHL:15 ppm	4

Dichlorosilane	4109-96-0	Toxic, corrosive, flammable	TLV:2 ppm PEL:5 ppm IDHL:50 ppm	4
Dimethylamine	124-40-3		TLV:5 ppm PEL:10 ppm IDHL:500 ppm	3
Ethylene Oxide	75-21-8	Toxic, flammable	TLV:1 ppm PEL:1 ppm IDHL:800 ppm	3
Fluorine	7782-41-4	Highly toxic, corrosive, oxidizer	TLV:0.1 ppm PEL:0.1 ppm IDHL:25 ppm	4
Germane	7782-65-2	Highly toxic, flammable, pyrophoric	TLV:0.2 ppm PEL:0.2 ppm IDHL:6 ppm	4
Hydrogen Bromide	10035-10-6	Toxic, corrosive,	TLV:3 ppm PEL:3 ppm IDHL:30 ppm	3
Hydrogen Chloride	7647-01-0	Toxic, corrosive,	TLV:5 ppm PEL:5 ppm IDHL:50 ppm	3
Hydrogen Fluoride	7664-39-3	Toxic, corrosive,	TLV:0.5 ppm PEL:3 ppm IDHL:30 ppm	4
Hydrogen Cyanide	74-90-8	Highly toxic, flammable	TLV:10 ppm PEL:10 ppm IDHL:50 ppm	4
Hydrogen Selenide	7783-07-5	Highly toxic, flammable	TLV:0.05 ppm PEL:0.05 ppm IDHL:1 ppm	4
Hydrogen Sulfide	7783-06-4	Toxic, flammable, corrosive	TLV:10 ppm PEL:10 ppm IDHL:100 ppm	4
Methyl Bromide	74-83-9	Toxic, flammable	TLV:1 ppm PEL:1 ppm IDHL:250 ppm	3
Methyl Isocyanate	624-83-9	Highly toxic, flammable	TLV: 0.02 ppm PEL:0.02 ppm IDHL:3 ppm	4
Methyl Mercaptan	74-93-1	Toxic, flammable	TLV:0.5 ppm PEL:0.5 ppm IDHL:150 ppm	4
Methylamine	74-89-5	Flammable, corrosive	TLV:5 ppm PEL:10 ppm IDHL:100 ppm	3
Nickel Carbonyl	13463-39-3	Highly toxic, flammable	TLV: 0.05ppm PEL:0.001 ppm IDHL:2 ppm	4
Nitric Oxide	10102-43-9	Highly toxic, oxidizer, corrosive	TLV:25 ppm PEL:25 ppm	3

			IDHL:100 ppm	
Nitrogen Dioxide	10102-44-0	Highly toxic, oxidizer, corrosive	TLV:3 ppm PEL:5 ppm IDHL:20 ppm	3
Ozone	10028-15-6	Highly toxic, oxidizer	TLV:0.05 ppm PEL:0.1 ppm IDHL:3 ppm	
Phosgene	75-44-5	Highly toxic	TLV:0.1 ppm PEL:0.1 ppm IDHL:2 ppm	4
Phosphine	7803-51-2	Highly toxic, flammable, pyrophoric	TLV:0.3 ppm PEL:0.3 ppm IDHL:50 ppm	4
Phosphorus Oxychloride	10025-87-3	Highly toxic	TLV:0.1 ppm PEL:0.5 ppm IDHL:1 ppm	4
Phosphorus Pentafluoride	7647-19-0	Toxic, corrosive	TLV:0.1 ppm PEL:1 ppm IDHL:50 ppm	
Phosphorous Trichloride	7719-12-2	Toxic, corrosive	TLV:0.2 ppm PEL: 0.5 ppm IDHL: 25 ppm	4
Selenium Hexafluoride	7783-79-1	Highly toxic	TLV:0.05 ppm PEL: 0.05 ppm IDHL:2 ppm	
Silane	7803-62-5	Pyrophoric	TLV:5 ppm PEL:5 ppm	4
Silicon Tetrafluoride	7783-61-1	Toxic, corrosive		3
Stibine	7803-52-3	Highly toxic, flammable,	TLV:0.1 ppm PEL:0.1 ppm IDHL:5 ppm	4
Sulfur Dioxide	7446-09-5	Toxic, corrosive	TLV:2 ppm PEL:2 ppm IDHL:100 ppm	3
Sulfuryl Fluoride	2699-79-8	Corrosive	TLV: 5 ppm PEL: 5 ppm IDHL:200 ppm	4
Tellurium Hexafluoride	7783-80-4	Highly Toxic	TLV: 0.02 ppm PEL: 0.02 ppm IDHL:1 ppm	
Tetrafluoroethylene	116-14-3	Flammable, peroxidizable	TLV: 2 ppm	4
Triethylamine	121-44-8	Highly flammable, toxic	TLV:2 ppm PEL:2 ppm IDHL:100 ppm	4
Tungsten Hexafluoride	7783-82-6	Toxic, corrosive		4