

TABLE I. Respiratory Hazards of Typical Gases and Recommended Cylinder Sizes for Laboratory

Gas	Respiratory Hazard(a)	Matheson		Air Products	
		Largest Cyl.(b)	Content	Largest Cyl.(b)	Content
Ammonia	M	3	5 lb.	D	3.4 lb.
Argon	L	1A	247 ft. ³	A	307 ft. ³
Boron trichloride	H	LB	1 lb.	LB	0.6 lb.
Boron trifluoride	H	4	2 lb.	LB	0.5 lb.
Butadiene	L	LB	6 oz.	LB	6 oz.
Butane	L	LB	6 oz.	LB	6 oz.
1-Butene	L	LB	6 oz.	LB	6 oz.
2-Butene	L	LB	6 oz.	LB	6 oz.
Carbon dioxide	L	1A	60 lb.	B	524 ft. ³
Carbon monoxide	H	4	0.4 lb.	D	0.7 lb.
Carbonyl sulfide	H	LB	0.5 lb.	LB	0.7 lb.
Chlorine	H	LB	1 lb.	LB	1 lb.
Chlorine trifluoride	H	LB	1 lb.	LB	1.9 lb.
Dimethylamine	H	LB	6 oz.	LB	6 oz.
Dimethyl ether	L	LB	6 oz.	LB	6 oz.
Ethane	L	LB	4 oz.	LB	5 oz.
Ethylamine	H	LB	10 oz.	LB	8 oz.
Ethylene oxide	H	LB	8 oz.	LB	8 oz.
Fluorine	H	4	8 oz.	D	5 oz.
Helium	L	-	-	A	267 ft. ³
Hydrogen	L	4	9 ft. ³	D	12.8 ft. ³
Hydrogen bromide	H	LB	1 lb.	LB	1.2 lb.
Hydrogen chloride	H	4	2 lb.	D	3.7 lb.
Hydrogen sulfide	H	LB	8 oz.	LB	8 oz.
Isobutylene	L	LB	6 oz.	LB	6 oz.
Methane	L	LB	6 oz.	LB	-
Methylacetylene	L	LB	6 oz.	LB	6 oz.
Methylamine	H	LB	6 oz.	LB	6 oz.
Methyl bromide	H	4	7.5 lb.	D	11.2 lb.
Methyl chloride	H	4	3 lb.	D	5.2 lb.
Methyl mercaptan	M	LB	8 oz.	LB	9.6 oz.
Methyl vinyl ether	(c)	4	2.5 lb.	D	4.2 lb.
Nitric oxide (NO)	H	3	6 oz.	D	5 oz.
Nitrogen	L	1A	227 ft. ³	A	280 ft. ³
Nitrogen dioxide	H	LB	12 oz.	LB	12 oz.
Nitrous oxide	L	3	6 lb.	D	0.5 lb.
Oxygen	L	1A	244 ft. ³	A	305 ft. ³
Phosphorus pentafluoride	H	LB	8 oz.	LB	8 oz.
Phosgene	H	LB	12 oz.	LB	1 lb.
Propane	L	LB	5 oz.	LB	6 oz.
P-10(90/10 Argon-methane mixture)	L	1A	240 ft. ³	-	-
Sulfur dioxide	M	4	5 lb.	D	7.8 lb.
Sulfur hexafluoride	L	3	10 lb.	D	6.8 lb.
Trimethylamine	H	LB	6 oz.	LB	6 oz.
Vinyl bromide	M	4	5 lb.	Not available	
Vinyl chloride	*	4	2.5 lb.	D	4.2 lb.

*Carcinogen as defined by the Occupational Safety and Health Administration, and should be used only under carefully controlled conditions.

(a)LOW(L): Little hazard is incurred by inhalation of air-borne vapor, fumes, or dust produced during normal operations in open areas.

MODERATE(M): Inhalation of vapor, fumes, or dust may be hazardous. Prolonged or repeated exposures or short exposures to high concentrations are dangerous.

HIGH(H): Inhalation of vapors or fumes for even short exposure is dangerous. Approved gas masks or air-supplied respirators must be worn, or the reaction must be carried out in a hood that will eliminate all exposure.

(b)LB = Lecture bottle.

(c)Insufficient data available to establish rating.