

# Gas Mixtures: Phosphine in N<sub>2</sub>, H<sub>2</sub>, He

## PH<sub>3</sub> Mixes

Component	PH <sub>3</sub>	N <sub>2</sub>	H <sub>2</sub>	He
Grade	5N7	5N	5N	5N
Purity, %	99.9997	99.999	99.999	99.999
Oxygen	≤0.1 ppmv	≤3.0 ppmv	≤2.0 ppmv	≤2.0 ppmv
Nitrogen	≤1.0 ppmv		≤5.0 ppmv	≤3.0 ppmv
Carbon Dioxide	≤0.1 ppmv	≤1.0 ppmv	≤1.0 ppmv	≤1.0 ppmv
Carbon Monoxide	≤0.1 ppmv	≤1.0 ppmv	≤1.0 ppmv	≤1.0 ppmv
Methane	≤0.1 ppmv	≤1.0 ppmv	≤0.5 ppmv	≤1.0 ppmv
Water	≤1.0 ppmv	≤3.0 ppmv	≤3.0 ppmv	≤3.0 ppmv

SHIP	CAS No.	7803-51-2	7727-37-9	1333-74-0	7440-59-7
	UN Number	UN 2199	UN 1066	UN 1049	UN 1046
DOT Shipping Name	Phosphine	Nitrogen, compressed	Hydrogen, compressed	Helium, compressed	
DOT Classification	2.3 (2.1) Poison Gas	2.2 Non-Flammable Gas	2.1 Flammable Gas	2.2 Non-Flammable Gas	
DOT Label	POISON GAS	NON-FLAMMABLE GAS	FLAMMABLE GAS	NON-FLAMMABLE GAS	
Specific Volume @STP	0.71 m <sup>3</sup> /Kg	0.86 m <sup>3</sup> /Kg	12.0 m <sup>3</sup> /Kg	6.04 m <sup>3</sup> /Kg	
	11.4 ft <sup>3</sup> /lb	13.9 ft <sup>3</sup> /lb	191.3 ft <sup>3</sup> /lb	96.2 ft <sup>3</sup> /lb	
Molecular Weight	34 g/mol	28.01 g/mol	2.02 g/mol	4.0 g/mol	
CGA/DISS/JIS	350/632/W22-14L				

- All mixes are manufactured to "Certified" grade – custom grades are available upon request
- Pneumatic valves, DIN and JIS connections are available upon request
- STP = 21°C or 70°F and 101.3 KPa or 1 atm
- Pure gas Technical and Ship data above are reported for reference only

CYLINDER	PH <sub>3</sub>	43.8	7.3	← Cylinder internal volume, liters
	Concentration	<b>QF/QB</b>	<b>UF/UB</b>	← <b>Cylinder Size</b>
	Range (c)	N <sub>2</sub> , H <sub>2</sub> , He	N <sub>2</sub> , H <sub>2</sub> , He	← Balance Gas
	50 ppm ≤ c < 15%	208	35	← Content, cf (minimum, nominal)*

\*please inquire for exact cylinder content

**Note on cylinder sizes:** Unless otherwise specified, cylinders will be provided as follows:

**All mixes >1%: QF/UF**

**All mixes <1%: QB/UB**

Cylinder	Treatment	Nominal Diameter (OD)xHeight*		Material of Construction	
		cm	Inches	Cylinder	Valve
QF	ULTRA-LINE®	9x51/52.5/56	23x130/134/143	CS	SS
QB	ULTRA-LINE II®	9x51/52.5/56	23x130/134/143	CS	SS
UF	ULTRA-LINE®	6x19/20.5/24	15x51/55/64	CS	SS
UB	ULTRA-LINE II®	6x19/20.5/24	15x51/55/64	CS	SS

\*Height is reported as the distance from the bottom of the cylinder to the cylinder neck/ center of the valve outlet/ top of the handwheel  
CS: Carbon Steel SS: Stainless Steel

⚠ WARNING: This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

