

# 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



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