

Gas Mixtures: Arsine in N₂, H₂, He

Ash₃ Mixes

Component	AsH ₃	N ₂	H ₂	He
Grade	5N5	5N	5N	5N
Purity, %	99.9995	99.999	99.999	99.999
Oxygen	≤1.0 ppmv	≤3.0 ppmv	≤2.0 ppmv	≤2.0 ppmv
Nitrogen	≤2.0 ppmv		≤5.0 ppmv	≤3.0 ppmv
Carbon Dioxide	≤0.5 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	≤0.5 ppmv	≤1.0 ppmv	≤0.5 ppmv	≤1.0 ppmv
Water	≤2.0 ppmv	≤3.0 ppmv	≤3.0 ppmv	≤3.0 ppmv

*H₂ and Higher Boranes excluded

SHIP	CAS No.	7784-42-1	7727-37-9	1333-74-0	7440-59-7
	UN Number	UN 2188	UN 1066	UN 1049	UN 1046
DOT Shipping Name	Arsine	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	0.31 m ³ /Kg	0.86 m ³ /Kg	12.0 m ³ /Kg	6.04 m ³ /Kg	
	5.0 ft ³ /lb	13.9 ft ³ /lb	191.3 ft ³ /lb	96.2 ft ³ /lb	
Molecular Weight	77.95 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" or "Certified Plus" grades – 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	AsH ₃	43.8	7.3	29.5	5.9	← Cylinder internal volume, liters
	Concentration	QF/QB	UF/UB	QH	UH	← Cylinder Size
Range (c)	N ₂ , H ₂ , He	N ₂ , H ₂ , He	N ₂ , H ₂ , He	N ₂ , H ₂ , He	← Balance Gas	
50 ppm ≤ c < 5%	208	35	140	28	← Content, cf (minimum, nominal)*	
5% ≤ c < 10%	115	19	77	15		
10% ≤ 15%	76	13	51	10.5		

Note on cylinder sizes:

Unless otherwise specified, cylinders will be provided as follows:

- All mixes >1%: QF/UF
- All mixes <1% >500 ppmv QB/UB
- All mixes ≤500 ppmv **QH/UH

*please inquire for exact cylinder content

**Aluminum cylinders recommended for mixtures, ≤500 ppmv

Cylinder	Treatment	Nominal Diameter (OD)xHeight*		Material of Construction	
		cm	Inches	Cylinder	Valve
QF	ULTRA-LINE®	23x130/134/143	9x51/52.5/56	CS	SS
QB	ULTRA-LINE II®	23x130/134/143	9x51/52.5/56	CS	SS
UF	ULTRA-LINE®	15x51/55/64	6x19/20.5/24	CS	SS
UB	ULTRA-LINE II®	15x51/55/64	6x19/20.5/24	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 Arsenic (inorganic arsenic compounds), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

⚠ 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.



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