

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 TECHNICAL -	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	
	5% ≤ c < 10%	115	19	77	15	← Content, cf (minimum, nominal)*
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



MATHESON

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