

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

**SiH<sub>4</sub>  
Mixes**

Component	SiH <sub>4</sub>	N <sub>2</sub>	H <sub>2</sub>	He
Grade	4N8	5N	5N	5N
Purity, %	99.998	99.999	99.999	99.999
Oxygen	≤5 ppmv	≤3.0 ppmv	≤2.0 ppmv	≤2.0 ppmv
Nitrogen	≤5 ppmv		≤5.0 ppmv	≤3.0 ppmv
Argon	≤40 ppmv			
Carbon Dioxide		≤1.0 ppmv	≤1.0 ppmv	≤1.0 ppmv
Carbon Monoxide		≤1.0 ppmv	≤1.0 ppmv	≤1.0 ppmv
Methane		≤1.0 ppmv	≤0.5 ppmv	≤1.0 ppmv
Carbon Dioxide + Carbon Monoxide	≤10 ppmv			
Water	≤3 ppmv	≤3.0 ppmv	≤3.0 ppmv	≤3.0 ppmv
Hydrogen	≤5,000 ppmv			
Chlorosilanes	≤10 ppmv			
Resistivity, N-type (ohm-cm)	>5,000			

SHIP	CAS No.	7803-62-5	7727-37-9	1333-74-0	7440-59-7
	UN Number	UN 2203	UN 1066	UN 1049	UN 1046
DOT Shipping Name	Silane	Nitrogen, compressed	Hydrogen, compressed	Helium, compressed	
DOT Classification	2.1 Flammable Gas	2.2 Non-Flammable Gas	2.1 Flammable Gas	2.2 Non-Flammable Gas	
DOT Label	FLAMMABLE GAS	NON-FLAMMABLE GAS	FLAMMABLE GAS	NON-FLAMMABLE GAS	
Specific Volume @STP	0.755 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	
	12.1 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	32.13 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	SiH <sub>4</sub>	43.8	7.3	← Cylinder internal volume, liters
	Concentration	<b>QB/QF</b>	<b>UB/UF</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)*
15% ≤ c < 50%	167	28		

**Note on cylinder sizes:** Unless otherwise specified, cylinders will be provided as follows:  
**All mixes >1%: QF/UF**  
**All mixes <1%: QB/UB**

\*please inquire for exact cylinder content

⚠ 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).



**MATHESON**

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