

Tungsten Hexafluoride

WF₆

Grade	Semicon 3N8/6N	ULSI Plus 4N8/6N5	Gigabit 5N5/7N
Vapor Phase Purity, %	99.98	99.998	99.9995
Oxygen + Argon	≤10 ppmv	≤1.0 ppmv	≤0.5 ppmv
Nitrogen	≤20 ppmv	≤1.0 ppmv	≤0.5 ppmv
Carbon Dioxide	≤10 ppmv	≤1.0 ppmv	≤0.5 ppmv
Carbon Monoxide	≤10 ppmv	≤1.0 ppmv	≤0.5 ppmv
Carbon Tetrafluoride	≤10 ppmv	≤1.0 ppmv	≤0.5 ppmv
Hydrogen Fluoride	≤100 ppmv	≤10 ppmv	≤1.0 ppmv
Sulfur Hexafluoride	≤10 ppmv	≤0.5 ppmv	≤0.5 ppmv
Silicon Tetrafluoride	≤10 ppmv	≤0.5 ppmv	≤0.5 ppmv
Liquid Phase Purity, %(w)	99.9999	99.99995	99.99999
Total Metals:	≤1,000 ppbw	≤500 ppbw	≤100 ppbw
Individual Metals - Cr		≤10 ppbw	≤5 ppbw
Fe		≤10 ppbw	≤5 ppbw
K		≤10 ppbw	≤5 ppbw
Na		≤10 ppbw	≤5 ppbw
Th		≤0.1 ppbw	≤0.08 ppbw
U		≤0.05 ppbw	≤0.05 ppbw

- A lot analysis is provided for metals, sampled in the liquid phase
- Individual cylinder analysis is provided for gas impurities.
- Pneumatic valves are available for a Nickel DISS 638 connection – Stainless Steel is not available
- WF₆ supplied in Nickel /Nickel-lined cylinders and Nickel valves to maintain the guaranteed purity.

CYLINDER	Internal Volume	Liters	24.0	18.8	8.0	4.2	
	Cylinder Sizes >>		GC	QM	GH	JD	
	Content	kg	59	50	20	10	
		lbs	130	110	44	22	
Change Point*	lbs	0.6	0.7	0.3	0.1		

*Recommended Cylinder Change Point at NTP, based on Phase Break, or the amount of product left in the cylinder when the liquid phase has completely evaporated and only gaseous product is left (estimate based on ideal gas behavior).

SHIP	DOT Shipping Name	Tungsten Hexafluoride	UN Number	UN 2196	Shipped as
	DOT Classification	2.3 (Poison Gas)	ECCN #	EAR99	Liquefied
	DOT Label	POISON GAS CORROSIVE	Harmonized #	2826.19.0080	Gas

TECHNICAL DATA	Cylinder Pressure	2.6 psig
	@NTP	1.2 atm
	Specific Volume	0.081 m ³ /kg
	@NTP	1.3 ft ³ /lb
	CAS No	7783-82-6
	CGA/DISS/JIS	670/638/J22-14R
Molecular Weight	297.84 g/mol	

Vapor Pressure	Temp, °C	0.0	15.5	21.0	32.2	43.3
	Press, psig	-8.0	0.0	2.6	15.6	31.7
	Temp, °F	32	60	70	90	110

RFO Data	Size, mm	0.254	0.3556	0.508	0.762	1.016
	Size, inches	0.010	0.014	0.020	0.030	0.040
	Flow, sccm	234	447	922	2057	3547
	Flow, scf/h	0.5	0.9	2.0	4.4	7.5

NTP = 21°C or 70°F and 101.3 kPa or 1 atm



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