

ELECTRONIC GASES

TUNGSTEN HEXAFLUORIDE WF_6

Tungsten Hexafluoride is a pale yellow, toxic, nonflammable, odorless extremely corrosive liquefied gas. It reacts violently with water to form hydrofluoric acid.

Container Information

CYLINDER SIZE	CONTENTS		Pressure@21.1°C Valve Outlet DOT Shipping Description:	2.6 psig CGA-670 Tungsten Hexafluoride, 2.3, UN 2196 Poison Inhalation Hazard Hazard Zone C
	LB	KG		
016	100	45.4	DOT Shipping Labels DOT Guide No. CAS Registry No.	Poison Gas 15 10294-35-3
008	40	18.2		
003	15	6.8		
7X	1	0.454		

Specifications

COMPONENT	ULSI	VLSI	SEMICONDUCTOR
TUNGSTEN HEXAFLUORIDE	99.9995% min	99.998% min	99.98% min
Carbon Dioxide	< 0.5 ppm	< 1.0 ppm	10.0 ppm
Carbon Monoxide	< 0.5 ppm	< 1.0 ppm	10.0 ppm
Carbon Tetrafluoride	< 0.5 ppm	< 1.0 ppm	10.0 ppm
Hydrogen Fluoride	< 1.0 ppm	< 10.0 ppm	100.0 ppm
Nitrogen	< 0.5 ppm	< 1.0 ppm	20.0 ppm
Oxygen + Argon	< 0.5 ppm	< 1.0 ppm	10.0 ppm
Sulfur Hexafluoride	< 0.5 ppm	< 0.5 ppm	10.0 ppm
Silicon Tetrafluoride	< 0.5 ppm	< 0.5 ppm	10.0 ppm

SHELF LIFE: 2 years

Physical Properties

Molecular Weight	297.48
Flammability Limits in air	Nonflammable
Specific Gravity, Gas @ 70°F(21.1°C), 1 atm(Air=1)	10.0
Density, Gas @ 70°F(21.1°C), 1 atm	216.3lb/ft ³ (3465kg/m ₃)
Density, Liquid @ Boiling Point, 1 atm	0.81lbs/ft ₃ (13.0kg/m ₃)
Specific Volume, Gas @ 70°F(21.1°C), 1 atm	1.24ft ³ /lb (0.77m ₃ /kg)
Boiling Point	67.1°F (19.5°C)
Melting Point	36.5°F (2.5°C)
Toxicity (as HF)	
PEL/TLV	3 ppm
STEL	6 ppm
LC ₅₀	450 ppm
IDLH	38 ppm