



Fluorinating agent Chemical Vapor Deposition (CVD) Processes Semiconductor Industry Usage Tungsten Hexafluoride

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: CMC
- Certification: COA
- Model Number: Wf6
- Minimum Order Quantity: 1 Piece
- Price: US \$ 15/PC
- Packaging Details: Cylinder/Tank
- Delivery Time: 15 days
- Payment Terms: L/C, T/T
- Supply Ability: 200 Tons/Year



Product Specification

- Product Name: Tungsten Hexafluoride
- Purity: 99.999%
- Appearance: Colorless
- DOT Class: 2.3
- Un No: Un2196
- Eines No: 7783-82-6
- Transport Package: 200t/Year
- Specification: 200t/Year
- Trademark: CMC
- Origin: China
- HS Code: 2812190091
- Supply Ability: 200t/Year
- CAS No.: 7783-82-6
- Formula: Wf6
- EINECS: 232-029-1



More Images



Product Description

Product Description

Tungsten hexafluoride (WF₆) is a chemical compound composed of one tungsten atom bonded to six fluorine atoms. It is a colorless, highly reactive gas at room temperature and pressure. Here are some key aspects of tungsten hexafluoride gas:

Formula and Structure: The chemical formula for tungsten hexafluoride is WF₆. It consists of one tungsten (W) atom bonded to six fluorine (F) atoms. The molecule has an octahedral structure, with the tungsten atom at the center and the fluorine atoms arranged around it.

Physical Properties: Tungsten hexafluoride is a gas at standard temperature and pressure (STP). It boils at around 17.1°C (62.8°F) and is typically stored and handled in pressurized cylinders. It is denser than air, with a density of about 13.1 g/L.

Reactivity: WF₆ is extremely reactive and readily reacts with a wide range of substances, including water, oxygen, and many organic compounds. It is a powerful oxidizing agent, meaning it can readily accept electrons from other substances. It can react violently with water, releasing corrosive hydrofluoric acid and tungsten oxide.

Uses: Tungsten hexafluoride finds applications in various industrial processes and research activities. Some common uses include:

Chemical Vapor Deposition (CVD): WF₆ is used in the CVD process to deposit thin films of tungsten on surfaces. This technique is employed in the microelectronics industry for fabricating integrated circuits and other electronic components.

Metal Organic Chemical Vapor Deposition (MOCVD): WF₆ is utilized in MOCVD processes to deposit thin films of tungsten for applications in optical coatings, semiconductor devices, and other thin-film applications.

Nuclear Reactor Control Rods: Tungsten hexafluoride can be used as a precursor for the production of tungsten control rods used in nuclear reactors.

Laboratory and Research: It is used in various research applications, such as studying chemical reactions, catalysts, and as a precursor in synthesizing other tungsten compounds.

Safety Considerations: Tungsten hexafluoride is highly toxic and corrosive. Its reaction with moisture can release toxic and corrosive hydrofluoric acid, which can cause severe burns and tissue damage. Proper safety precautions, including the use of protective equipment and handling procedures, should be followed when working with this compound.

It's important to note that the information provided here is based on general knowledge, and specific applications or safety considerations may vary depending on the context and intended use. Always consult reliable sources and follow appropriate safety protocols when working with any chemical compound.

Product Spec:

Tungsten Hexafluoride WF₆ GAS
CAS No.: 7783-82-6
EINECS No.: 232-029-1
UN No.: UN2196
Purity: 99.999%
Dot Class: 2.3
Appearance: Colorless
Grade Standard: Electron Grade, Industrial Grade

The COA of Product:

Test items	Units	Quality requirements	Test results
CF ₄	ppm	<0.5	<0.01
O ₂	ppm	<0.5	<0.01
N ₂	ppm	<1	0.03
CO	ppm	<0.5	<0.02
CO ₂	ppm	<0.5	<0.01
SiF ₄	ppm	<0.5	<0.1
SF ₆	ppm	<0.5	<0.1
HF	ppm	<5	0.19
Al	ppb	≤10	<0.020
As	ppb	≤10	<0.001
B	ppb	≤10	<0.005
Ca	ppb	≤5	<0.200
Cd	ppb	≤2	<0.001
Cr	ppb	≤10	<0.020
Fe	ppb	≤10	<0.007
K	ppb	≤5	<0.100
Mn	ppb	≤10	<0.001
Na	ppb	≤5	<0.040
Th	ppb	≤0.1	<0.001
Ti	ppb	≤10	<0.002
Li	ppb	≤10	<0.002
U	ppb	≤0.05	<0.001
Zn	ppb	≤10	<0.005
Si	ppb	≤10	<0.100
Pb	ppb	≤10	<0.001
P	ppb	≤2	<0.300
Mg	ppb	≤10	<0.020
Ni	ppb	≤20	<0.030
Cu	ppb	≤5	<0.005
Mo	ppb	≤10	<0.001

Total impurities of other metal ppb ≤500

<0.0010

Detailed Photos



Company Profile



Shanghai Kemike Chemical Co., Ltd is staffed by trained personnel, combine many years experience in Gas industry .We supply cylinder gas, electronic gas, etc ., and the gas holder, panel, valves and fittings and other equipment, parts and engineering services to our customers in China and worldwide; The products are involved in various industrial fields, such as semiconductor chip, solar cell, LED, TFT-LCD, optical fiber, glass, laser, medicine , etc.,. Our mission is to partner with our global customers to provide support, solutions and quality products that are innovative, reliable, and safe. Our products mainly include: H₂, O₂, N₂, Ar, CO₂, propane, acetylene, helium, laser mixed gas, SiH₄, SiH₂Cl₂, SiHCl₃, SiCl₄, NH₃, CF₄, NF₃, SF₆, HCL, N₂O, doping mixed gas (TMB, PH₃, B₂H₆) and other electronic gases.

SiCl ₄	NH ₃	NH ₃	CH ₃ F	SiH ₄	Kr	H ₂ S	WF ₆	F ₆ +Cl ₂
4MS	C ₃ F ₈	C ₃ F ₈	TEOS	CH ₄	PH ₃	SF ₆	C ₂	HCl+Ne
CF ₄	C ₄ F ₈	SiH ₂						TMB+H ₂
SiF ₄	C ₃ H ₈	Cl ₂						He +As
BBr ₃	C ₃ H ₆	DCE						Ge+Se
POCl ₃	N ₂	SO ₂						D+B
BCl ₃	D ₂	CO ₂						CO+NO
SiHCl ₃	CH ₂ F ₂	HF						Ar+O ₂
TMAI	DMZn	DEZn						Xe+NO
AsH ₃	C ₂ H ₄	C ₂ H ₂	HBr	COS	Ar+O ₂			
GeH ₄	C ₂ H ₆	B ₂ H ₆	H ₂ Se	GeCl ₄	Xe+NO			



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