Depositing tungsten metal films Semiconductor application Gas Tungsten Hexafluoride

Our Product Introduction

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
- Appearance: Colorless
- Transport: By Sea
- Purity: 99.999%
- Model No.: Tungsten Hexafluoride
- Transport Package: 10L 40L 50L
- Specification: 10L 40L 50L
- Trademark: CMC
- Origin: China
- HS Code: 2812190091
- Supply Ability: 200t/Year
- CAS No.: 7783-82-6
- Formula: Wf6
- EINECS: 232-029-1
- Constituent: Industrial Pure Air

More Images

Our Product Introduction

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Product Description

Product Description

Tungsten hexafluoride gas, often abbreviated as WF6, is a chemical compound composed of tungsten (W) and fluorine (F). It is a colorless, corrosive, and highly reactive gas. Here are some key points about tungsten hexafluoride gas:

Chemical Formula and Structure: Tungsten hexafluoride has the chemical formula WF6. It consists of one tungsten atom bonded to six fluorine atoms, forming an octahedral molecular geometry.

Physical Properties: Tungsten hexafluoride is a dense gas with a molecular weight of 297.84 g/mol. It has a boiling point of approximately 17.1°C (62.8°F) and is typically stored and handled in its liquid form under controlled conditions.

Reactivity: WF6 is highly reactive and readily reacts with a variety of substances. It reacts vigorously with water, moisture, and oxygen, releasing toxic hydrogen fluoride (HF) gas. Due to its reactivity, WF6 is commonly used as a fluorine source in various chemical processes.

Applications: Tungsten hexafluoride gas has several industrial applications, including:

Semiconductor Industry: WF6 is used as a precursor in the production of tungsten films or layers in semiconductor manufacturing processes, such as chemical vapor deposition (CVD) and atomic layer deposition (ALD). It serves as a source of tungsten for depositing thin films on integrated circuits and other electronic devices.

Metal-Organic Chemical Vapor Deposition (MOCVD): WF6 is utilized in MOCVD processes to deposit tungsten films in the production of high-brightness light-emitting diodes (LEDs) and other optoelectronic devices.

Surface Treatment: WF6 is employed in surface treatment applications, such as etching and cleaning of metals, ceramics, and glass surfaces.

Research and Development: Tungsten hexafluoride gas is sometimes used in research laboratories as a source of tungsten or as a fluorine-containing reagent in various chemical reactions.

Safety Considerations: Tungsten hexafluoride is a toxic and corrosive gas. It reacts with moisture in the air to produce hydrogen fluoride, which is highly corrosive and can cause severe burns. Proper handling, storage, and disposal procedures, along with the use of appropriate personal protective equipment, are essential to ensure worker safety.

It is important to note that the specific applications, handling procedures, and safety considerations for tungsten hexafluoride gas may vary depending on the industry and intended use. It is recommended to consult relevant safety guidelines, regulations, and the material safety data sheet (MSDS) provided by the manufacturer for comprehensive information on the safe handling and usage of WF6.

Overview

Basic Info.

Model NO.	WF6	Transport Package	Cylinder
Specification	10L/15kg	Trademark	CMC
Origin	Suzhou, China	HS Code	2812190091

Production Capacity 200t/Year

Product Spec:

ungsten 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
CF4	ppm	<0.5	<0.01
O2	ppm	<0.5	<0.01
N2	ppm	<1	0.03
CO	ppm	<0.5	<0.02
CO2	ppm	<0.5	<0.01
SiF4	ppm	<0.5	<0.1
SF6	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	

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.

SiCl4	NH3	NH3	CH3F	SiH4	Kr	H2S	WF6	F6+Cl2
4MS	C3F8	C3F8	TEOS	CH4	PH3	SF6	C2	HCl+Ne
CF4	C4F8	SiH2						TMB+H2
SiF4	C3H8	Cl2						He +As
BBr3	C3H6	DCE						Ge+Se
POCl3	N2	SO2						D+B
BCl3	D2	CO2						CO+NO
SiHCl3	CH2F2	HF	AsH3	C2H4	C2H2	HBr	COS	Ar+O2
TMAl	DMZn	DEZn	GeH4	C2H6	B2H6	H2Se	GeCl4	Xe+NO

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