Cylinder Gas China Supply Best Price High Quality 99.999% Geh4 Germane

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: CMC
- Certification: COA
- Model Number: Geh4
- Minimum Order Quantity: 1kg
- Price: US $100/kg
- Packaging Details: Cylinder/Tank
- Delivery Time: 15 days
- Payment Terms: L/C, T/T
- Supply Ability: 5000kg/month

Product Specification

- Product Name: Germane Gas
- Grade: Electronic Grade
- Purity: 99.999%
- Model No.: Germane Gas
- Transport Package: Cylinder
- Specification: 44L
- Trademark: CMC
- Origin: China
- CAS No.: 7782-65-2
- Formula: Geh4
- Constituent: Industrial Pure Air
- Grade Standard: Industrial Grade
- Chemical Property: Poisonous Gases
- Transport: By Sea
- Customization: Available | Customized Request

More Images

Product Description

Product Description

Germane gas (GeH4) is a colorless, flammable, and highly toxic gas. It is a compound of germanium (Ge) and hydrogen (H) and belongs to the group of hydrides. Here are some key points about germane gas:

Chemical Composition: Germane gas is composed of one germanium atom bonded to four hydrogen atoms (GeH4).

Properties: Germane gas possesses several important properties:

Flammability: Germane is highly flammable and can form explosive mixtures with air when exposed to open flames, sparks, or heat sources.

Toxicity: Germane is extremely toxic and poses significant health risks. It can cause severe burns, eye damage, and is harmful if inhaled or ingested. Inhalation of germane gas can lead to respiratory distress, lung damage, and even death.

Pyrophoricity: Germane can ignite spontaneously in the presence of air or oxygen, which adds to its flammability hazard.

Production: Germane gas can be produced through the reaction of germanium tetrachloride (GeCl4) with hydrogen gas (H2) at high temperatures. Other methods involve the reaction of germanium with hydride sources or the decomposition of metal-germanium hydrides.

Uses: Germane gas has various applications in different fields:

Semiconductor Industry: Germane is used in the production of semiconductors, specifically for depositing germanium-containing thin films. It serves as a precursor in the chemical vapor deposition (CVD) process, which is used to create thin films on substrates for electronic devices.

Research and Development: Germane gas is used in laboratories for research purposes, such as the synthesis of germanium-containing compounds or the study of germanium-based materials.

Specialty Chemicals: Germane can be employed as a precursor in the synthesis of organogermanium compounds, which find applications in areas like catalysis and materials science.

Safety Considerations: Germane gas is highly hazardous and should be handled with extreme caution. Safety measures should include:

Proper Ventilation: Germane gas should only be used in well-ventilated areas or under fume hoods to minimize exposure risks.

Personal Protective Equipment (PPE): When working with germane gas, appropriate PPE, such as gloves, goggles, and protective clothing, should be worn to protect against contact and inhalation.

Storage and Handling: Germane gas cylinders should be stored in a secure, well-ventilated area away from incompatible materials and sources of ignition. Proper handling techniques should be followed to prevent leaks or releases.

Emergency Response: In the event of a germane gas leak or exposure, immediate evacuation of the area and contact with emergency services should be initiated. Anyone affected by germane gas should seek medical attention promptly.

Due to its extreme flammability, toxicity, and pyrophoric nature, germane gas requires strict adherence to safety protocols and procedures to prevent accidents and ensure the safety of individuals working with or around it.

Basic Info.

Model NO.	GeH4	Constituent	Germane 99.999%
Grade Standard	Electronic Grade	Chemical Property	Inflammable Gas
Trademark	CMC	Transport Package	44L
Specification	99.999	Origin	China

Germane - (GeH4)

Description

Germane is a flammable , colorless gas with characteristic pungent ,nauseating odor .Its boiling point is - 90°C. It is unstable and can decompo se explosively when heated to greater than 330°C.

Specifications	
Purity , %	99.999
Oxygen + Argon	≤0.5 ppmv
Nitrogen	≤2.0 ppmv
Carbon Dioxide	≤2.0 ppmv
Carbon Monoxide	≤1.0 ppmv
Methane	≤1.0 ppmv
Water	≤1.0 ppmv
Chlorogermanes	≤5.0 ppmv
Digermane*	≤20.0 ppmv
Germoxanes	≤5.0 ppmv
Hydrogen*	≤50.0 ppmv
Trigermane	≤1.0 ppmv

Ship	
DOT Shipping Name	Germane
DOT Classification	2.3
DOT Label	Toxic Gas, Flammable Gas
UN Number	UN2192
CAS No.	7782-65-2
CGA/DISS/JIS	350/632/W22-14L

Shipped as	Compressed Gas

Technical Information

Cylinder State @ 21.1°C	Gas
Flammable Limits In Air	0.5-100%
Auto Ignition Temperature (°C)	54.4
Molecular Weight (g/mol)	76.62
Specific gravity (air =1)	2.65
Critical Temperature (°C)	34.8
Critical Pressure (psig)	

Applications

Used for the deposition of epitaxial and amorphous silicon - germanium alloys , and as a component for PECVD of (Si, Ge)O2 films with controllable refractive index for photonic .

Detailed

Photos

Company Profile

ShangHai CMC 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

Certifications

Workshop Display:

Shipping Methods

Shanghai Kemike Chemical Co.,Ltd

+86 18762990415 williamchen@cmc-chemical.com gascylindertank.com