China Factory Supply High Quality Gas Geh4 Gas Cylinder 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
- Purity: 99.999%
- Transport: By Sea
- 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
- Appearance: Colorless
- Customization: Available | Customized Request

More Images

Product Description

Product Description

Germane gas (GeH4) is a colorless, flammable, and highly toxic gas. It is the simplest compound of germanium, an element with the atomic number 32. 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 a highly flammable gas. It can form explosive mixtures with air or oxygen, presenting a fire hazard.

Toxicity: Germane gas is highly toxic and poses health risks upon inhalation. It can cause severe respiratory irritation and damage to the lungs.

Odor: Germane gas has a foul and unpleasant odor, similar to that of rotten eggs.

Production: Germane gas can be produced through various methods, including:

Chemical Reaction: It can be synthesized by reacting germanium tetrachloride (GeCl4) with hydrogen gas (H2) in the presence of a catalyst.

Thermal Decomposition: Germane can also be generated by thermally decomposing germanium hydrides, such as digermane (Ge2H6), at elevated temperatures.

Uses: Germane gas has limited practical applications due to its toxicity and flammability. However, it finds some use in specialized areas:

Semiconductor Industry: Germane gas is used in the production of semiconductors, particularly for the deposition of germanium-containing thin films. It can be employed in the chemical vapor deposition (CVD) process to create germanium layers in electronic devices.

Research and Laboratory Applications: Germane gas is utilized in research laboratories for experimental purposes, such as studying the properties of germanium compounds or as a precursor in chemical reactions.

Safety Considerations: Germane gas is highly hazardous and requires strict safety precautions when handling or using it. Some important safety measures include:

Ventilation: Germane gas should only be used in well-ventilated areas or under fume hoods to prevent the accumulation of toxic or flammable concentrations.

Flammability Precautions: As a flammable gas, germane should be handled with caution, ensuring that ignition sources are avoided and that appropriate fire safety measures are in place.

Toxicity Protection: Proper personal protective equipment, such as respiratory protection and chemical-resistant gloves, should be worn when working with germane gas to prevent inhalation or skin contact.

Storage and Handling: Germane gas cylinders should be stored and handled according to specific guidelines provided by the manufacturer to ensure safety.

Due to its high toxicity and flammability, germane gas should be handled by trained professionals in controlled environments, adhering to all necessary safety protocols.

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

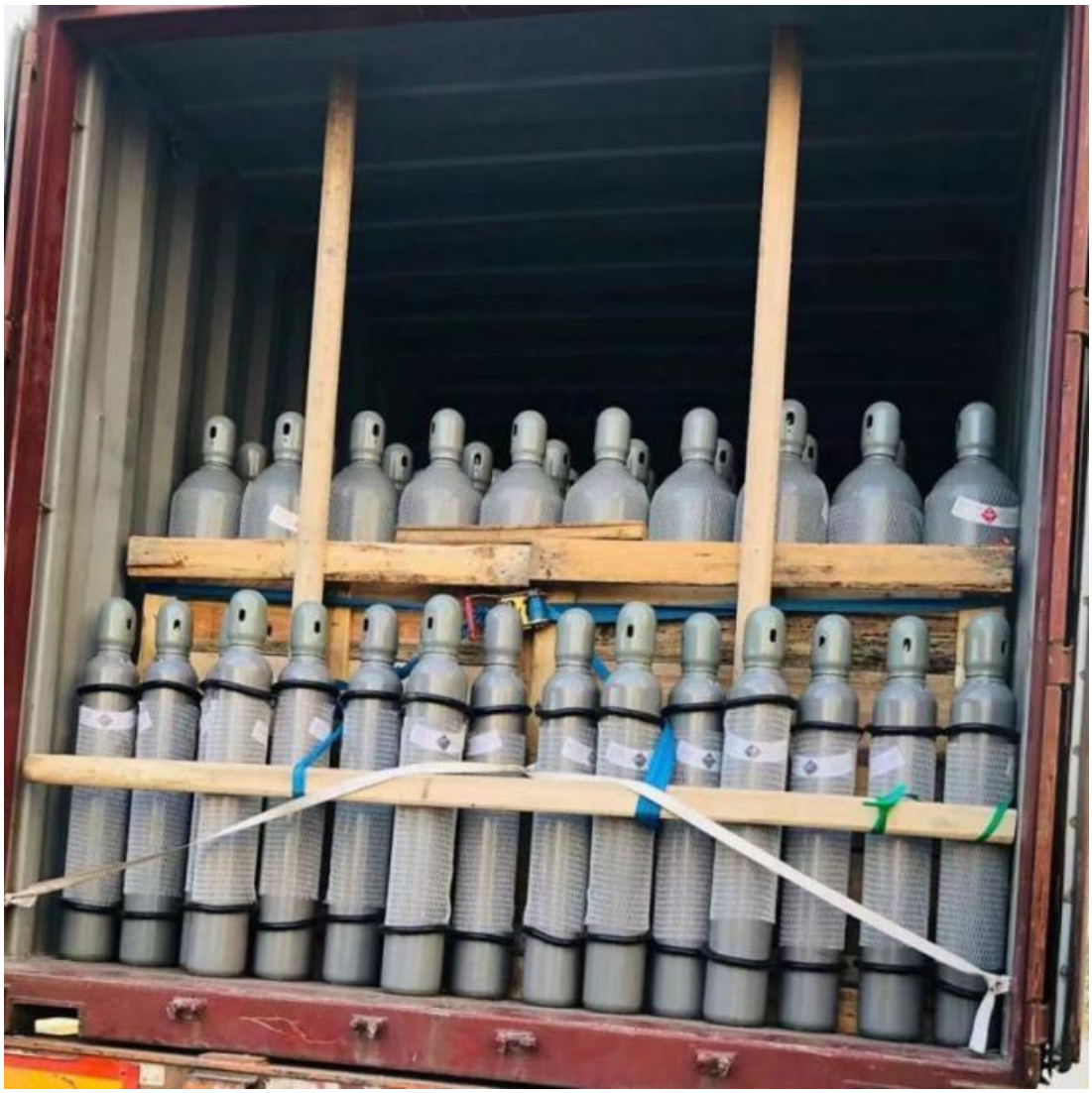
Technical Information

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)	

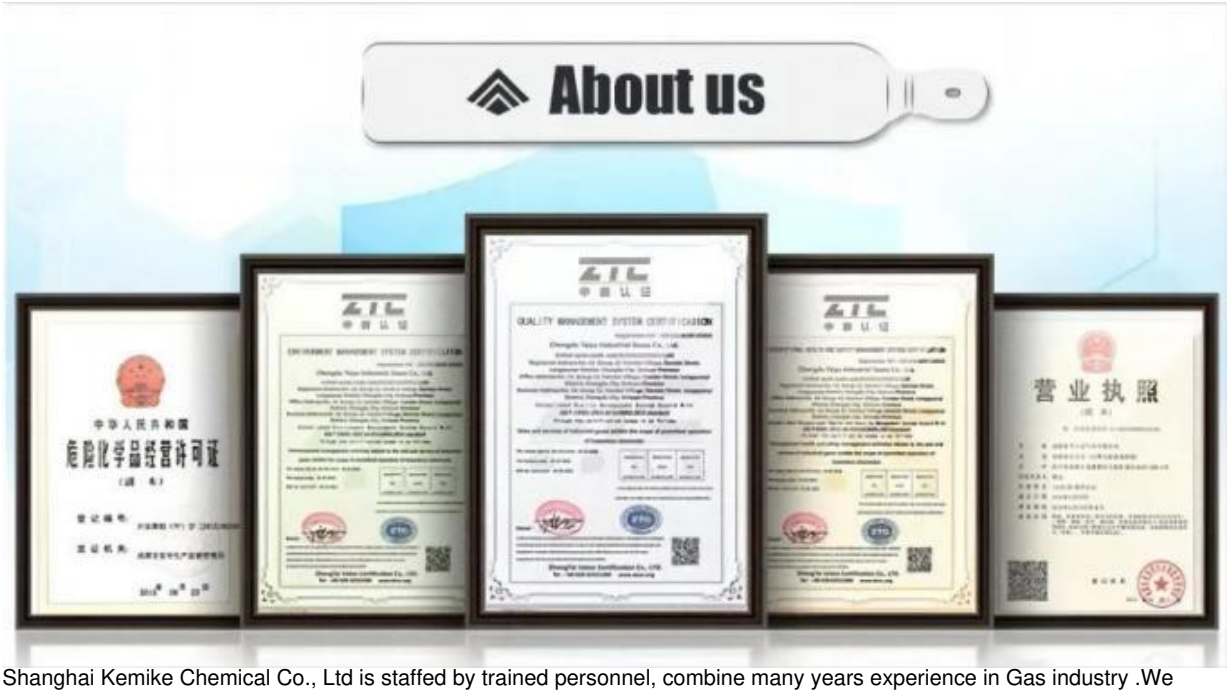
Applications

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 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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