China Factory Germane 99.999% High Quality Geh4 Cylinder Gas 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%
- Appearance: Colorless
- 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

Germane gas (GeH4) is a colorless, flammable, and highly toxic gas. It is a compound of the element germanium (Ge) with hydrogen (H). 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 ignite in the presence of an ignition source, such as a flame or spark.

Toxicity: Germane gas is highly toxic and poses serious health risks if inhaled or exposed to the skin. It can cause severe respiratory and neurological effects.

Odor: Germane gas has a disagreeable odor, described as similar to that of rotten eggs.

Instability: Germane gas is unstable and can decompose at high temperatures or when exposed to certain catalysts.

Production: Germane gas can be produced through various methods, including the reaction of germanium tetrachloride (GeCl4) with hydrogen gas (H2) at high temperatures.

Uses: Germane gas has limited practical applications due to its high toxicity and flammability. However, it is used in certain specialized areas:

Semiconductor Industry: Germane gas is used in the production of germanium-based semiconductors. It can be used as a precursor for chemical vapor deposition (CVD), a technique used to deposit thin films of germanium on substrates for electronic devices.

Research and Laboratory Settings: Germane gas is used in research laboratories for experimental purposes, such as studying germanium chemistry and synthesizing germanium-containing compounds.

Safety Considerations: Germane gas is highly hazardous and requires strict safety precautions:

Toxicity: Germane gas is highly toxic and can cause severe health effects. It should be handled with extreme caution, and exposure to the gas or its decomposition products should be avoided.

Flammability: Germane gas is highly flammable and can form explosive mixtures with air. It should be stored and handled in accordance with proper flammable gas safety practices.

Ventilation: Germane gas should only be used in well-ventilated areas or under controlled conditions in specialized equipment such as fume hoods.

Personal Protective Equipment (PPE): When working with germane gas, appropriate PPE, such as gloves, protective clothing, and respiratory protection, should be used to minimize the risk of exposure.

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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