



## China Factory Best Price Geh4 Cylinder Gas 99.999% High Purity Germane

### Our Product Introduction

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#### 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
- Transport: By Sea
- Appearance: Colorless
- 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
- Purity: 99.999 %
- Customization: Available | Customized Request



#### More Images



## Product Description

### Product Description

Germane gas is a compound composed of germanium and hydrogen, with the chemical formula  $\text{GeH}_4$ . It is a colorless, flammable, and highly toxic gas. Here are some key points about germane gas:

**Chemical Composition:** Germane gas is composed of one germanium atom bonded to four hydrogen atoms ( $\text{GeH}_4$ ).

**Properties:** Germane gas possesses several important properties:

**Toxicity:** Germane gas is highly toxic and can be harmful when inhaled or exposed to the skin. It can cause severe health effects and should be handled with extreme caution.

**Flammability:** Germane gas is flammable and forms explosive mixtures with air. It should be kept away from open flames, sparks, or other potential sources of ignition.

**Volatility:** Germane gas is a volatile compound, meaning it easily evaporates at room temperature and pressure.

**Production:** Germane gas is typically produced by the reaction of germanium tetrachloride ( $\text{GeCl}_4$ ) with hydrogen gas ( $\text{H}_2$ ) under specific conditions.

**Uses:** Germane gas has limited applications due to its toxicity and hazardous nature. Some instances where it is used are:

**Semiconductor Manufacturing:** Germane gas is used in the production of semiconductors as a dopant, which modifies the electrical properties of the material. It is introduced into the production process to create germanium-containing layers or structures.

**Research and Development:** Germane gas is used in research and development laboratories for various purposes, such as studying germanium compounds and their properties.

**Safety Considerations:** Germane gas is highly toxic and poses significant health hazards. It can cause respiratory problems, central nervous system damage, and other severe health effects. Proper safety measures, including the use of appropriate personal protective equipment and the implementation of ventilation systems, should be followed when working with germane gas. Handling and storage of germane gas should adhere to strict safety guidelines and regulations.

It's important to note that due to the toxicity and hazards associated with germane gas, its use and handling are typically restricted to specialized industries and research settings where strict safety protocols can be implemented.

#### 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 - ( $\text{GeH}_4$ )

##### Description

Germane is a flammable , colorless gas with characteristic pungent ,nauseating odor .Its boiling point is - 90°C. It is unstable and can decompose 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 )O<sub>2</sub> 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: H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, Ar, CO<sub>2</sub>, propane, acetylene, helium, laser mixed gas, SiH<sub>4</sub>, SiH<sub>2</sub>Cl<sub>2</sub>, SiHCl<sub>3</sub>, SiCl<sub>4</sub>, NH<sub>3</sub>, CF<sub>4</sub>, NF<sub>3</sub>, SF<sub>6</sub>, HCL, N<sub>2</sub>O, doping mixed gas (TMB, PH<sub>3</sub>, B<sub>2</sub>H<sub>6</sub>) and other electronic gases.



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



 Shanghai Kemike Chemical Co.,Ltd

 +86 18762990415

 williamchen@cmc-chemical.com

 gascylindertank.com