



Industrial/Medical/Electronic Grade Cheap Cylinder Gas Geh4 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 GeH_4 . It is a colorless, flammable gas that is highly toxic and reactive. Here are some key points about germane gas:

Chemical Composition: Germane gas is composed of one germanium atom bonded to four hydrogen atoms (GeH_4).

Properties: Germane gas possesses several important properties:

Toxicity: Germane gas is highly toxic and poses significant health hazards. Inhalation or exposure to high concentrations can cause severe health effects, including respiratory irritation, lung damage, and organ failure.

Flammability: Germane gas is flammable and can form explosive mixtures with air when exposed to an ignition source.

Volatility: Germane gas is a volatile compound, meaning it can easily vaporize at room temperature.

Production: Germane gas can be produced through several methods, including the reaction of germanium tetrachloride (GeCl_4) with hydrogen gas (H_2) or the reaction of germanium dioxide (GeO_2) with a reducing agent like hydrogen.

Uses: Germane gas has various applications:

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

Research and Development: Germane gas is used in research laboratories as a source of germanium for experiments and studies.

Specialty Chemical Synthesis: Germane gas can be used as a reagent in certain chemical reactions to introduce germanium into organic compounds or to synthesize specialized chemicals.

Safety Considerations: Germane gas is highly toxic and poses significant health and safety risks. Some important considerations include:

Inhalation Hazard: Germane gas should be handled in well-ventilated areas or under appropriate fume hoods to prevent inhalation exposure.

Flammability Hazard: Germane gas is flammable and should be handled with caution to avoid ignition sources, such as open flames or sparks.

Storage and Handling: Proper storage, handling, and transportation practices should be followed to ensure the safety of germane gas. Safety equipment, such as gas detectors and personal protective equipment, should be used when working with this compound.

It is important to note that germane gas is highly toxic and poses significant health risks. Proper safety precautions, including appropriate ventilation, personal protective equipment, and adherence to safety guidelines, should be followed when working with this compound.

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 - (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)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.

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



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