China

CMC

COA

Si2cl6

Hexachlorodisilane

Si2cl6

By Sea

99.9%

Cylinder

CMC

China

Si2cl6

40L, 200L

2812190091

100t/Year 7783-82-6

7783-82-6

Industrial Pure Air

Industrial Grade

# China factory High Purtiy Hcds 99.9% Si2cl6 Hexachlorodisilane

### **Basic Information**

- Place of Origin:
- Brand Name:
- Certification:
- Model Number:
- Minimum Order Quantity: 1kg
- Price: US \$40/kg
- Packaging Details: Cylinder/Tank
- Delivery Time: 15 days
- Payment Terms: L/C, T/T
- Supply Ability: 50000kg/month

## **Product Specification**

- Product Name:
- Model No.:
- Transport:
- Purity:
- Transport Package:
- Specification:
- Trademark:
- Origin:
- HS Code:
- Supply Ability:
- CAS No.:
- Formula:
- EINECS:
- Constituent:
- Grade Standard:



### More Images











### **Product Description**

Hexachlorodisilane (Si2Cl6) is an inorganic compound consisting of two silicon (Si) atoms bonded together with six chlorine (Cl) atoms. It is a colorless gas that is primarily used as a precursor in the production of silicon-based materials. Here are some key points about hexachlorodisilane gas:

Structure and Properties: Hexachlorodisilane has a tetrahedral molecular structure, with each silicon atom bonded to three chlorine atoms and the other silicon atom. It is a volatile and reactive compound, and its boiling point is around 140 °C.

Synthesis and Production: Hexachlorodisilane is typically synthesized by the reaction of silicon tetrachloride (SiCl4) with elemental silicon (Si) or silicon powder at high temperatures. It can also be produced through the reaction of silicon with chlorine gas (Cl2). Applications:

Semiconductor Industry: Hexachlorodisilane is a crucial precursor in the production of various silicon-based thin films for the semiconductor industry. It is used in chemical vapor deposition (CVD) and atomic layer deposition (ALD) processes to deposit silicon-containing layers with high purity and uniformity.

Silicon Nitride Production: Hexachlorodisilane can be used as a precursor for the synthesis of silicon nitride (Si3N4) ceramics. It reacts with ammonia (NH3) to form silicon nitride, which is used in the manufacturing of ceramics, cutting tools, and protective coatings.

Surface Modification: Hexachlorodisilane is employed as a surface treatment agent to modify the surface properties of materials. It can enhance hydrophobic or hydrophilic characteristics, improve adhesion, or provide chemical resistance to surfaces.

Safety Considerations: Hexachlorodisilane is a highly reactive and volatile compound. It is corrosive to metals and can cause severe burns upon contact with the skin or eyes. It is also toxic if inhaled or ingested. Proper handling, storage, and personal protective equipment should be used when working with hexachlorodisilane or any other hazardous chemicals.

Hexachlorodisilane gas is an important precursor in the semiconductor industry and the production of silicon-based materials. Its reactivity and ability to deposit high-quality silicon films make it valuable for various technological applications. However, it should be handled with caution due to its hazardous properties.

#### Basic Info.

N T

| Model NO.         | Si2Cl6             | Grade Standard      | Electron Grade |
|-------------------|--------------------|---------------------|----------------|
| Transport Package | Cylinder, Canister | Specification       | 40L, 200L      |
| Trademark         | CMC                | Origin              | Suzhou, China  |
| HS Code           | 2812190091         | Production Capacity | 100t/Year      |

### Specifications:

| IUPAC name                 | Hexachlorodisilane     |
|----------------------------|------------------------|
| Other names<br>Identifiers | Disilicon hexachloride |
| CAS No.:                   | 13465-77-5             |
| EC No.:                    |                        |
|                            | 236-704-1              |
| Properties                 |                        |
| Molecular Formula:         | Si2Cl6                 |
| Molar mass:                | 268.88 g/mol           |
| Appearance:                | Colorless liquid       |
| Melting point:             | ≤20 °C                 |
| Boiling point:             | 144 °C (291 °F; 417 K) |
| Flash point:               | >93°C                  |
| Vopor density(Air=1):      | >1                     |
| Relative density(Water=1): | 1.562                  |

#### Sample Test:

#### Test Items Units Specifications Test Result

| <b>GC</b> wt% ≥99.9 | 99.905  |
|---------------------|---|
| ng/g ≤0.5           | <0.05   |
| ng/g≤0.5            | < 0.05  |
| ng/g≤0.5            | <0.05   |
| ng/g≤1.0            | 0.35  |
| ng/g≤0.5            | 0.08  |
| ng/g≤0.5            | 0.16  |
| ng/g≤1.0            | 0.18  |
| ng/g≤0.5            | < 0.05  |
| ng/g≤0.5            | <0.05   |
| ng/g≤1.0            | 0.48  |
| ng/g≤0.5            | <0.05   |
|                     | ng/g ≤0.5<br>ng/g ≤0.5<br>ng/g ≤1.0<br>ng/g ≤0.5<br>ng/g ≤0.5<br>ng/g ≤0.5<br>ng/g ≤0.5<br>ng/g ≤0.5<br>ng/g ≤0.5<br>ng/g ≤0.5<br>ng/g ≤1.0 |

| Ni | ng/g≤0.5 | 0.06  |
|----|----------|-------|
| Cu | ng/g≤0.5 | <0.05 |
| Zn | ng/g≤0.5 | <0.05 |

### Detailed Photos











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