



Solar Cells Integrated Circuits and Other Electronic Components Production Usage Sihcl3 Trichlorosilane

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: CMC
- Certification: COA
- Model Number: Sihcl3
- Minimum Order Quantity: 1kg
- Price: US \$500/kg
- Packaging Details: Cylinder/Tank
- Delivery Time: 30 days
- Payment Terms: L/C, T/T
- Supply Ability: 200 Tons/Year



Product Specification

- Product Name: Trichlorosilane
- Transport: By Sea
- Orign: China
- Purity: 99.99%
- Model No.: Puritytrichlorosilane Gas
- Transport Package: Sea Transportation
- Specification: 40L 50L 200L
- Trademark: CMC
- Origin: China
- HS Code: 2812190091
- Supply Ability: 100t/Year
- CAS No.: 10025-78-2
- Formula: Sihcl3
- EINECS: 7783-82-6
- Constituent: Industrial Mixture



More Images



Product Description

Product Description

Trichlorosilane (SiHCl₃) is a chemical compound composed of one silicon (Si) atom bonded to three chlorine (Cl) atoms and one hydrogen (H) atom. It is a colorless, volatile liquid at room temperature. Trichlorosilane is an important precursor in the production of various silicon-based materials, particularly polysilicon, which is used in the manufacturing of semiconductors and solar cells. Here are some key points about trichlorosilane:

Chemical Composition: Trichlorosilane consists of one silicon (Si) atom bonded to three chlorine (Cl) atoms and one hydrogen (H) atom. Its chemical formula is SiHCl₃.

Properties: Trichlorosilane is a volatile liquid with a boiling point of 31.8 degrees Celsius (89.2 degrees Fahrenheit) and a melting point of -127.5 degrees Celsius (-197.5 degrees Fahrenheit). It has a pungent odor and is highly reactive.

Production: Trichlorosilane is primarily produced through the reaction of metallurgical-grade silicon (MG-Si) with hydrogen chloride (HCl) gas: $\text{Si} + 3\text{HCl} \rightarrow \text{SiHCl}_3 + \text{H}_2$

This reaction typically occurs at high temperatures in the presence of a catalyst, such as copper.

Uses: Trichlorosilane has a significant industrial application:

Polysilicon Production: Trichlorosilane is a key precursor in the production of polysilicon, which is used in the manufacturing of semiconductors, solar cells, and other electronic devices. Trichlorosilane is first purified and then subjected to chemical vapor deposition (CVD) processes to form polysilicon films.

Safety Considerations: Trichlorosilane is toxic and flammable. It is harmful if swallowed, inhaled, or comes into contact with the skin or eyes. Trichlorosilane can also release hydrogen gas when exposed to moisture or water. Proper safety precautions, such as the use of protective equipment, good ventilation, and appropriate handling procedures, should be followed when working with trichlorosilane.

It is important to handle trichlorosilane with care and adhere to safety measures to mitigate potential risks associated with its toxicity and flammability.

Basic Info.

Model No:	SiHCl ₃	Quality	Electron Grade
Transport Package	Y-Cylinder, T-Drum, Tt, Tanker	Specification	20L, 40L, 280L and customizable
Trademark	CMC	Origin	Suzhou, China
HS Code	2812190091	Production Capacity	500ton/Month

Specification:

Trichlorosilane is a silicon precursor for epitaxial silicon-containing thin films, especially for the preparation of starting wafers.

Purity %:	≥99.85
Resistivity:	≥ 300 ohm-cm
Boron:	≤ 0.1 ppba silicon
Total Carbon:	≤ 5 ppma
Iron:	≤ 5 ppba
Other Chlorosilane :	≤ 500 ppm
Cylinder State @ 21.1°C :	Liquid
Flammable Limits In Air :	7-83%
Auto Ignition Temperature (°C):	182
Molecular Weight (g/mol):	135.45
Specific gravity (air =1):	4.67
Critical Temperature (°C):	242.5

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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