

GeH₄ and 1%/10%GeH₄

Properties: Germane is a colorless gas with a pungent odor at room temperature. It is flammable, has blue-red flame when burning in air, can form explosive mixture with air. Colorless gas with irritating odor. Flammable, blue-red flame when burning in air, can form explosive mixture with air. It is reductive, can react with oxidizing substances and can undergo autocatalytic decomposition reaction.

Uses: Ultra high-purity Ge metal preparation; doping reagent in electronic industry; ESG for MOCVD to form Ge containing film; It is an important raw material for solar cells.

· Identifier

Chemical Formula	GeH ₄
CAS No.	7782-65-2
EINECS No.	231-961-6

· Physical and chemical properties

Molecular weight	76.672 g/mol	Flash point	/	Reactivity	Unstable compounds and flammable
Appearance	Colorless gas	Melting point	-165°C	Solubility	Insoluble in water
Density	1.53 g/cm ³	Boiling point	-88°C	Storage	Shady and cool, well-ventilated

· Package specification

Cylinder size	20 L Aluminum Cylinder	47.5 L Aluminum Cylinder	440 L Carbon Steel Cylinder	Valve connection	CGA 350 Steel / CGA 632 Steel / CGA 632 Steel
Fill weight(lbs)	2.2 / 4.41 / 33			Cylinder dimensions(in)	7.9*39.4 / 9.8*53.9 / 24*83
Fill weight(kgs)	1 / 2 / 15			Cylinder dimensions(cm)	20*90 / 25*137 / 610*2110

· Impurities

GeH ₄	Specification /ppmv	1%GeH ₄ +H ₂	Specification /ppmv	10%GeH ₄ +H ₂	Specification /ppmv
O ₂ +Ar	≤0.5	O ₂ +Ar	≤0.05	O ₂ +Ar	≤0.05
N ₂	≤2.0	N ₂	≤0.05	N ₂	≤0.05
CO	≤1.0	CO	≤0.05	CO	≤0.05
CO ₂	≤1.0	CO ₂	≤0.05	CO ₂	≤0.05
CH ₄	≤1.0	CH ₄	≤0.05	CH ₄	≤0.05
H ₂ O	≤1.0	H ₂ O	≤0.2	H ₂ O	≤0.2
Ge ₂ H ₆	≤20.0	Ge ₂ H ₆	≤1.0	Ge ₂ H ₆	≤1.0
Ge ₃ H ₈	≤1.0	Ge ₃ H ₈	≤0.1	Ge ₃ H ₈	≤0.1
Chlorogermanes	≤5.0	Chlorogermanes	≤0.1	Chlorogermanes	≤0.1
Germoxanes	≤5.0	Germoxanes	≤0.1	Germoxanes	≤0.1
H ₂	≤30.0	/	/	/	/

VITAL MICRO-ELECTRONICS TECHNOLOGY CO., LIMITED

High Purity Materials Production Plant: No.16, Chuangxing Third Road, Qingyuan, Guangdong China 511517

Tel: 0763-3993123 Fax: (86) 020 - 83511907 Website: www.vitalchem.com

E-mail: semi_sales@vitalchem.com

