

2% PH₃/H₂ mixed gas

Properties: Phosphine is a colorless gas, highly toxic and flammable. Cylinders are generally used to store liquefied phosphine. Pure phosphine is odorless, but phosphine gas made from metal phosphides usually has a garlic or rotten fish odor. Phosphine is strongly reducing and reacts violently with air or oxygen.

Uses: Widely used for semiconductor material preparation: substrate/epitaxial, ion implant and doping; also used for organic synthesis, organophosphorus chemistry.

· Identifier

Chemical Formula	PH ₃
CAS No.	7803-51-2
EINECS No.	232-260-8

· Physical and chemical properties

Molecular weight	33.998 g/mol	Flash point	-110°C	Reactivity	Stable, spontaneously ignite in the air
Appearance	Colorless gas	Melting point	-133.8°C	Solubility	Soluble in water
Density	1.379 g/cm ³	Boiling point	-87.5°C	Storage	Shady and cool, well-ventilated

· Package specification

Cylinder size	47.5 L Aluminum Cylinder	Valve connection	CGA350/DISS632
Fill weight(lbs)	33	Cylinder dimensions(in)	9.3*54.1
Fill weight(kgs)	15	Cylinder dimensions(cm)	23.5*137.5

· Mixed Gas

Content	Unit	Specification
Diborane Concentration	Vol%	2±0.1
Hydrogen Concentration	/	Balance

· PH₃

Project	Unit	Specification	Project	Unit	Specification
O ₂	ppmv	≤1	CH ₄	ppmv	≤0.5
N ₂	ppmv	≤1	H ₂ O	ppmv	≤1
CO	ppmv	≤0.5	AsH ₃	ppmv	≤0.5
CO ₂	ppmv	≤0.5	/	/	/

· H₂

Project	Unit	Specification	Project	Unit	Specification
O ₂	ppmv	≤0.1	CO ₂	ppmv	≤0.1
N ₂	ppmv	≤0.2	CH ₄	ppmv	≤0.1
CO	ppmv	≤0.1	H ₂ O	ppmv	≤0.5

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