

高纯氟气 High Pure Fluorine

1、产品介绍 Product introduction

氟气 (F₂)，相对分子量为 38.00，沸点为-188℃，溶于水，是一种具有刺激性气味的强氧化性浅黄色有毒气体。氟气化学性质异常活泼，几乎能与所有的元素发生反应，被誉为自然界中最活泼的物质。氟气可以赋予含氟材料和含氟化学品许多优异的性能，在信息、电子和化工领域应用广泛。高纯氟气作为化学气相沉积反应腔室的清洗剂，具有很强的反应活性且不会造成温室效应，在半导体领域极具市场潜力。

Fluorine (F₂) is a kind of strong oxidizing light yellow poisonous gas with pungent smell, relative molecular mass of 38.00, the boiling point of -188 °C, which is soluble in water. Fluorine gas is known as the most active substance in nature due to its extremely active chemical properties, which can react with almost all elements. Fluorine gas can endow fluorine-containing materials and chemicals with many excellent properties and is widely used in the fields of information, electronics and chemicals. As cleaning agent for the reaction chamber of chemical vapor deposition, high pure fluorine gas has strong reactivity and will not cause greenhouse effect, so it has great market potential in the field of semiconductor.

2、产品指标 Quality specification

项目 Items	单位 Units	指标 Indexs	
氟气 (F ₂) Fluorine	Vol.%	≥99%	≥99.99%
四氟化碳 (CF ₄) Carbon tetrafluoride	Vol.%	≤0.1% (v/v)	≤0.001% (v/v)
空气 (Air)	Vol.%	≤0.5% (v/v)	≤0.006% (v/v)
氟化氢 (HF) Hydrogen fluoride	Vol.%	≤0.2% (v/v)	≤0.001% (v/v)
二氧化碳 (CO ₂) Carbon dioxide	Vol.%	≤0.1% (v/v)	≤0.001% (v/v)
六氟化硫 (SF ₆) Sulfur hexafluoride	Vol.%	≤0.1% (v/v)	≤0.001% (v/v)

3、产品用途 Application

氟气因其特殊的性质，可用作化学气相沉积反应腔室的清洗剂，也可作为氟化试剂用于无机含氟材料、有机含氟材料、半导体材料制造领域。氟气被广泛应用于电子、激光技术、医药、塑料、石油化工、航空航天等领域，是化工领域的重要原料。

Fluorine gas can be used as cleaning agent for reaction chamber of chemical vapor deposition because of its special properties, also can be used as fluoridizer for inorganic fluorine-containing materials, organic fluorine-containing materials and semiconductor manufacturing materials. Fluorine gas is widely used in electronics, laser technology, medicine, plastics, petroleum chemical industry, aerospace and other fields, which is an important raw material in the field of chemical industry.

4、包装、贮藏 Packaging and storage

高纯氟气压缩充入钢瓶中，在包装贮存氟气之前要对其储运钢瓶内壁进行有效的钝化处理。具体包装规格可根据用户要求定制。高纯氟气存储于阴凉、通风仓库内，仓库温度不应超过 30℃，远离火种热源，与易燃或可燃物、金属粉末等分开存放，并防止阳光直射。

High pure fluorine gas is compressed and filled into the cylinder. Before packaging and storing fluorine gas, effective "passivation treatment" should be carried out on the inner wall of the storage and transportation cylinder. Specific packaging specifications can be customized according to user requirements. High pure fluorine gas is stored in a shady and ventilated storeroom away from fire and heat source, temperature of storeroom is lower than 30℃. It should be separately stored with inflammable (combustible) and metal powder, protecting against direct sunlight.