

全氟丁二烯 Perfluorobutadiene

1、产品介绍 Product introduction

全氟丁二烯 (C_4F_6) 是一种无色无味且不溶于水的气体。全氟丁二烯熔点为 $-132.0^{\circ}C$ ，沸点为 $5.9^{\circ}C$ 。全氟丁二烯是一种含有六个氟原子和两个碳碳双键的共轭烯烃，作为一种优异的蚀刻气体，由于其独特的 F/C 比，与传统使用的全氟饱和氟碳类蚀刻气体相比，全氟丁二烯具有更高的蚀刻选择性、精确性和纵横比，可以蚀刻小于 100nm 甚至更窄的电子线路。此外， C_4F_6 比 C_4F_8 具有更高的对光阻和氮化硅选择比，在使用时可以提高蚀刻的稳定性，提高蚀刻速率和均匀度，从而提高产品优良率。

Perfluorobutadiene (C_4F_6) is a kind of colorless, odorless, and water insoluble gas. Its melting point is $132.0^{\circ}C$, boiling point is $5.9^{\circ}C$. Perfluorobutadiene is a kind of conjugated olefins which contains six fluorine atoms and two carbon-carbon double bond, as a kind of excellent etching gas, because of its unique F/C ratio, perfluorobutadiene has higher etching selectivity, accuracy and aspect ratio than those of traditional perfluorinated saturated fluorocarbon etching gas, perfluorobutadiene can etch less than 100 nm even narrower electronic circuit. In addition, C_4F_6 has a higher selective ratio of photoresist and silicon nitride than that of C_4F_8 , which can improve the etching stability, etching rate and uniformity, and thus improve the product quality.

2、产品指标 Quality specification

项目 Items	单位 Unit	指标 Index
C ₄ F ₆	Vol. %	≥99.99
N ₂	Vol.ppm	≤10
O ₂ +Ar	Vol.ppm	≤2
H ₂ O	Vol.ppm	≤3
CO ₂	Vol.ppm	≤10
CO	Vol.ppm	≤3
异丙醇 Isopropanol	Vol.ppm	≤5
其他氟碳化合物 Other fluorocarbon	Vol.ppm	≤70
活性氟化物 (Measured by HF)	Wt.ppm	≤2

3、产品用途 Application

作为刻蚀气用于半导体产品的等离子介质刻蚀。

Used as etching gas for plasma etching of semiconductor products.

4、包装、贮藏 Packaging and storage

全氟丁二烯充装在钢瓶中，钢瓶型号为 B10，尺寸 14cm×83cm，内部容积 10.1L，毛重 14.7kg，有效载荷 10kg。具体包装规格可根据用户要求定制更改。

Perfluorobutadiene is filled in steel cylinders with the model of B10, size of 14cm×83cm, internal volume of 10.1L, gross weight of 14.7kg, payload of 10kg. Packaging specifications can be customized according to customers' requirements.