

三氟化氯 Chlorine Trifluoride

1、产品介绍 Product introduction

三氟化氯（ClF₃），相对分子量为 92.45，是一种腐蚀性、无色有甜味的气体，降温变为绿色液体，即使在低浓度时也有高度刺激性，具有强氧化性。在高温时，三氟化氯能够点燃许多有机化合物和许多金属，遇水产生猛烈反应，水解产生有毒物质。在半导体工业中，三氟化氯用于清洗化学气相沉积腔室，它可以用于从室壁去除半导体材料，而不必拆卸腔室，不需要使用等离子体的激活，腔室的热量足以使其分解并与半导体材料反应。

Chlorine trifluoride (ClF₃) is a kind of corrosive, colorless, sweet-tasting gas with a molecular weight of 92.45, it turns green liquid when it is cooled, it is strong irritating and oxidizing even at low concentration. Chlorine trifluoride can ignite kinds of organic compounds and metals at high temperatures, ClF₃ reacts violently with water and produce toxic substances through hydrolysis. In the semiconductor industry, chlorine trifluoride is used to clean chemical vapor deposition chamber. It can be used to remove semiconductor materials from the chamber wall without disassembly of the chamber. The chamber is heated enough to make semiconductor material decompose and react with ClF₃ without activation of plasma.

2、产品指标 Quality specification

项目 Items	单位 Units	指标 Index
三氟化氯 Chlorine trifluorideis (ClF ₃) ≥	Vol. %	99.9
氧气 Oxygen (O ₂) ≤	ppm	20
氮气 Nitrogen (N ₂) ≤	ppm	50
硫化氢 Hydrogen sulfide (H ₂ S) ≤	ppm	700

3、产品用途 Application

在半导体工业中，三氟化氯可用于清洗化学气相沉积腔室。此外，三氟化氯还可用作氟化剂、燃烧剂、推进剂中的氧化剂、高温金属的切割油等。

In the semiconductor industry, chlorine trifluoride is used for cleaning chemical vapor deposition chambers, combustion agent, oxidant in the propellant, metal cutting oil at high temperature.

4、包装、贮藏 Packaging and storage

三氟化氯储存于标准无缝钢瓶中，包装规格有 500g，1kg，2kg。具体包装规格可根据用户要求定制更改。三氟化氯储存于阴凉、通风、干燥库房，远离火种、热源。储区应备有泄漏应急处理设备。

Chlorine trifluoride is stored in standard seamless cylinders, the packing specifications include 500g, 1kg, 2kg. Specific packaging specifications can be customized according to user requirements. Chlorine trifluoride is stored in shady, ventilated and dry storeroom away from fire and heat source. The storage area shall be equipped with equipment for emergency.