三溴化硼 11 Boron11 Tribromide

1、产品介绍 Product introduction

三溴化硼 11（$B^{11}Br_3$）在常温常压下为具有刺鼻恶臭的无色发烟液体，能放出刺激性蒸气，遇水及受热分解放出有毒气体 HBr。不溶于水，与乙醇、醚等的氧化物不生成附加化合物，但与胺类、磷烷类作用生成多种附加化合物。三溴化硼能与许多电子对给予体（如含磷、氮、砷、氧、硫和卤素等物质）反应生成酯位化合物。高纯三溴化硼 11 在半导体工业用作掺杂源。

Boron tribromide(BBr_3) is a kind of colorless fuming liquid with pungent odor at normal temperature and pressure. BBr_3 can release irritating steam, it releases toxic gas HBr when it is heated or exposed to water. BBr_3 is insoluble in water, it does not form additional compound with oxides such as ethanol and ether, but it reacts with amines and phosphorane to form a variety of additional compounds. Boron tribromide can react with a lot of electron pair donor (such as phosphorus, nitrogen, arsenic, oxygen, sulfur and halogen) to form ester compounds. High pure boron11 tribromide is used as doping source in semiconductor industry.

2、产品指标 Quality specification

项目 Items	单位 Units	指标 Indexs	
三溴化硼 11 Boron11 Tribromide≥	ω/%	99.9999 (6N)	99.99999 (7N)
铝 Aluminum≤	ω/(μg/kg)	10	5
锑 Antimony≤	ω/(μg/kg)	10	3
砷 Arsenic≤	ω/(μg/kg)	4	1
钡 Barium≤	ω/(μg/kg)	2	1
铋 Bismuth≤	ω/(μg/kg)	2	1
镉 Cadmium≤	ω/(μg/kg)	2	1
钙 Calcium≤	ω/(μg/kg)	10	5
铬 Chromium≤	ω/(μg/kg)	2	1
钴 Cobalt≤	ω/(μg/kg)	2	1
铜 Cuprum≤	ω/(μg/kg)	5	2

镓 Gallium≤	ω/(μg/kg)	2	1
金 Gold≤	ω/(μg/kg)	2	1
铁 Iron≤	ω/(μg/kg)	10	10
铅 Plumbum≤	ω/(μg/kg)	2	1
锂 Lithium≤	ω/(μg/kg)	2	1
镁 Magnesium≤	ω/(μg/kg)	10	8
锰 Manganese≤	ω/(μg/kg)	2	1
汞 Mercury≤	ω/(μg/kg)	12	1
镍 Nickel≤	ω/(μg/kg)	2	1
钾 Kalium≤	ω/(μg/kg)	10	3
银 Argentum≤	ω/(μg/kg)	2	1
钠 Sodium≤	ω/(μg/kg)	10	5
锡 Stannum≤	ω/(μg/kg)	2	1
锶 Strontium≤	ω/(μg/kg)	2	1
钛 Titanium≤	ω/(μg/kg)	2	1
钒 Vanadium≤	ω/(μg/kg)	10	2
锌 Zinc≤	ω/(μg/kg)	5	3
色度 Chroma≤	APHA	60	60

3、产品用途 Application

高纯三溴化硼 11 用于半导体工业包括集成电路、太阳能电池、半导体分离器件等作为 P 型掺杂源，通过热扩散对晶体硅进行 P 型掺杂。此外，三溴化硼还用做有机合成的催化剂、中间体和溴化剂以及制造高纯硼及其它有机硼化物的原料。

High pure boron11 tribromide is used as p-type doped sources in the semiconductor industry including integrated circuits, solar cells, semiconductor separation devices, etc., which doped crystal silicon with P-type dopant by thermal diffusion. In addition, boron tribromide is also used as a catalyst, intermediate and brominating agent for organic synthesis, as well as a raw material for the manufacture of high pure boron and other organoboron.

4、包装、贮藏 Packaging and storage

高纯三溴化硼 11 包装于石英瓶中，石英瓶外套厚质 PVC 塑料袋和不透光塑料膜，外包装箱为 PE 塑料材质，包装规格为 1kg、5kg，具体包装规格可根据用户要求定制更改。产品贮存于阴凉、干燥仓房中，库温在 20℃左右、相对湿度不超过 75%。与碱类、醇类等分开存放，防潮、避光保存。

High pure boron11 tribromide is packed in a quartz bottle. The quartz bottle is covered with thick PVC plastic bag and opaque plastic film. The outer packing box is made of PE plastic material. The packaging specifications include 1 kg and 5 kg. Specific packaging specifications can be customized according to users' requirements. The products are stored in a shady and dry storeroom with temperature around 20℃, relative humidity less than 75%. Keep away from alkali and alcohol, keep away from moisture and light.