

硼-11 B-11

1、产品介绍 Product introduction

天然硼元素有两种稳定同位素，即 ^{10}B 和 ^{11}B ，相对丰度分别为 19.78% 和 80.22%。 ^{11}B 质子数为 5，中子数为 6，与 ^{10}B 不同， ^{11}B 对热中子的吸收截面仅为 0.005 靶。天然硼或硼化合物作为半导体器件制程掺杂源使用时由于引入 ^{10}B 一起进行掺杂，在某些特定使用环境会对半导体器件性能造成致命的影响，轻则影响电子设备运行速度，重则导致死机甚至毁机。因此 ^{11}B 被用于半导体器件制程的掺杂剂，能够有效提高器件的半导体性能和抗辐射抗干扰能力。此外， ^{11}B 还可用于特种钢材制造行业，用于提高材料的耐高温和耐辐射性能。

Natural boron has two kinds of stable isotopes, ^{10}B and ^{11}B , with relative abundance of 19.78% and 80.22%, respectively. ^{11}B has five protons and six neutrons. Unlike ^{10}B , ^{11}B has an absorption cross section of only 0.005b for thermal neutrons. When natural boron or boron compound is used as the dopant of semiconductor devices, the introduction of ^{10}B will cause fatal impact on the performance of semi-conductor devices in certain specific use environment, which may affect the running speed of electronic devices, or even lead to destruction of the machine. Therefore, ^{11}B is used as a dopant in the process of semiconductor device manufacturing, which can effectively improve the semiconductor performance and anti-radiation and anti-interference ability of the device. In addition, ^{11}B can also be used as an additive to the steel used in the manufacture of reactors, which can greatly improve the resistance to high temperature and radiation.

2、产品用途 Application

^{11}B 可以应用在半导体行业，用 ^{11}B 作为掺杂剂可以使得硅离子布植紧密，从而生产高度集成、高密度的微型芯片，且提高半导体器件的抗辐射干扰能力。 ^{11}B

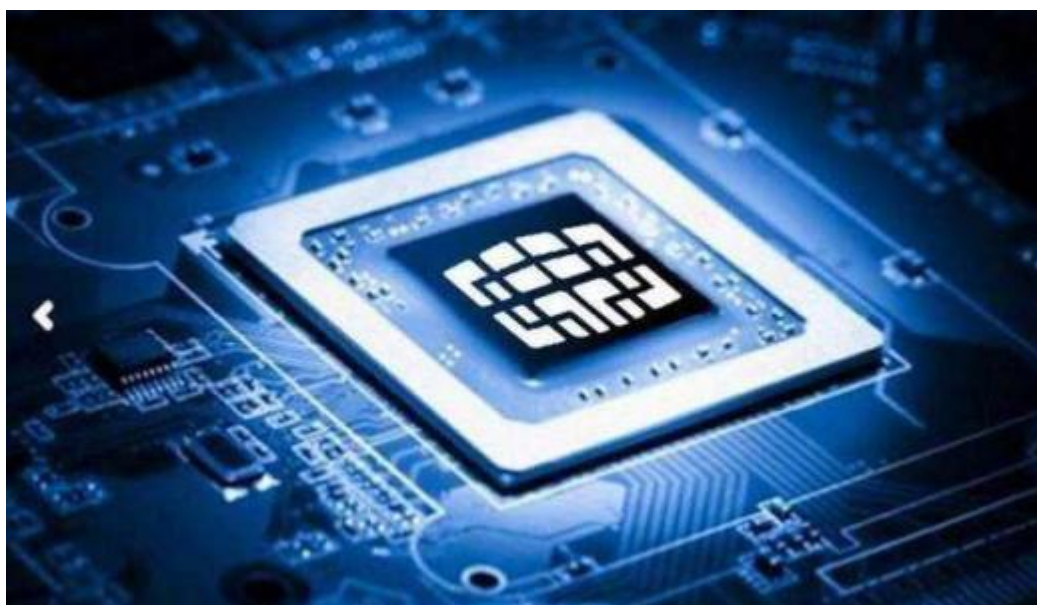
也可以作为钢材的添加剂，这种钢材用于制造反应器，可以使反应器的耐高温、耐辐射性能得到大幅度提高。

As a dopant, ^{11}B can be applied in the semiconductor industry, which makes silicon ion layout closely, so that the highly integrated and high-density microchips can be produced. ^{11}B can also be used as an additive to the steel used in the manufacture of reactors, which can greatly improve the resistance to high temperature and radiation.

3、包装、贮藏 Packaging and storage

用聚乙烯塑料瓶外套木箱包装。每瓶净重 250g 或 500g。贮存在通风、干燥的库房中、密封存放，要远离火源。

Packing in polythene plastic bottles and with wooden cases protection outside. Each bottle has a net weight of 250g or 500g. Product should be stored in a ventilated and dry warehouse, stay away from fire.



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