



The Applications of Industrial Microwave

Silicon nitride ceramic is an excellent material, it can maintain high strength at high temperature conditions, low density, good corrosion resistance, wear resistance, thermal shock resistance, creep resistance, and excellent chemical stability, and having self-lubricating effects. Thus, nano silicon nitride powder always uses in the preparation of the composite material, the composite material can form fine dispersed phase, thus it can greatly improve the composite of overall performance.

Silicon nitride or a wide band gap semiconductor, it can get a higher doping concentration, which have the potential to be an excellent host materia, it also can be used in microelectronics and optoelectronics, and through doping to adjust their electronic and optical properties .

Silicon powder method is the main industrial production process of silicon nitride powder, but since the conventional process, the silicon powder in general will leave Silicon nitride particles. And to achieve sufficient nitride, often the reaction temperature last higher, longer nitriding times, and the particle size distribution of the powder obtain broad, coarse particles. Microwave sintering furnace atmosphere and Microwave Technology on nitrided silicon powder with conventional electric heating different way outside to the inside heating, microwave heating is dielectric loss fume from heat in the microwave field, a whole way of heating beneficial fume nitrogen technology can effectively overcome the "silicon core" issue, and the time of nitriding is short .

Thus obtained silicon nitride powder has high purity, fine particles and uniform particle size.

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