

## SILICON NITRIDE POWDER

Stock No: NS6130-05-565



# Si<sub>3</sub>N<sub>4</sub>



Follow us:

I www.nanoshel.com I sales@nanoshel.com

in

Y



#### Silicon Nitride Powder

Silicon nitride is a chemical compound of the elements silicon and nitrogen. Si3N 4 is the most thermodynamically stable of the silicon nitrides. Si3N4 has, during the past 40 years, developed into a range of very-well-established materials with many very useful properties, of which resistance to thermal shock, high-temperature stability, hardness, and wear resistance are, at the moment, the most important.

Silicon nitrides (Si3N4) feature an excellent combination of material properties. They are nearly as light as silicon carbide (SiC), but their microstructure gives them excellent thermal shock resistance and their high fracture toughness makes them resistant to impacts and shocks.

| Quic       | k I | Facts                  | 40               |  |
|------------|-----|------------------------|------------------|--|
| Product    | :   | Silicon Nitride Powder | 35 -             |  |
| Color      | :   | Black Powder           | 30 -             |  |
| Stock No   | :   | NS6130-05-565          | .≩ <sup>25</sup> |  |
| CAS        | :   | 7440-21-3              | utensity<br>20 - |  |
| Purity     | :   | 99%                    | <u>د</u>         |  |
| APS        | :   | 40-50µm                | 10 -             |  |
| Other Meta | :   | 8500ppm                | 5 -              |  |
|            |     |                        | 0                |  |

10 20 30 40

50

APS (µm)

60

70

80

100

### **Technical Specification**

| Molecular Formula | Molecular Weight | Density                   | Melting Point |
|-------------------|------------------|---------------------------|---------------|
| Si₃N₄             | 140.28 g/mol     | 2.2-3.5 g/cm <sub>3</sub> | 1900 °C       |

### Applications

- Rotating bearing balls and rollers
- Cutting tools
- Engine moving parts valves, turbocharger rotors
- Engine wear parts cam followers, tappet shims
- Turbine blades, vanes, buckets
- Metal tube forming rolls and dies
- Precision shafts and axles in high wear environments
- Weld positioners





INTELLIGENT MATERIALS PVT LTD Derabassi Punjab (140507) INDIA

+91 9779 550077 9779238252

NANOSHEL UK LIMITED Chapel House, Chapel St Cheshire, CW12 4AB United Kingdom

+44 1782 454 144 +44 74 105 48802

NANOSHEL LLC 3422 Old Capitol Suit 1305 Wilmington DE - 19808 United States

+1 646 470 4911

