Ceralloy® Silicon Nitride Engineered Components

Automotive

Aerospace

Metal Forming

Mineral Processing

Molten Metal Processing

Oil & Gas

Petrochemical

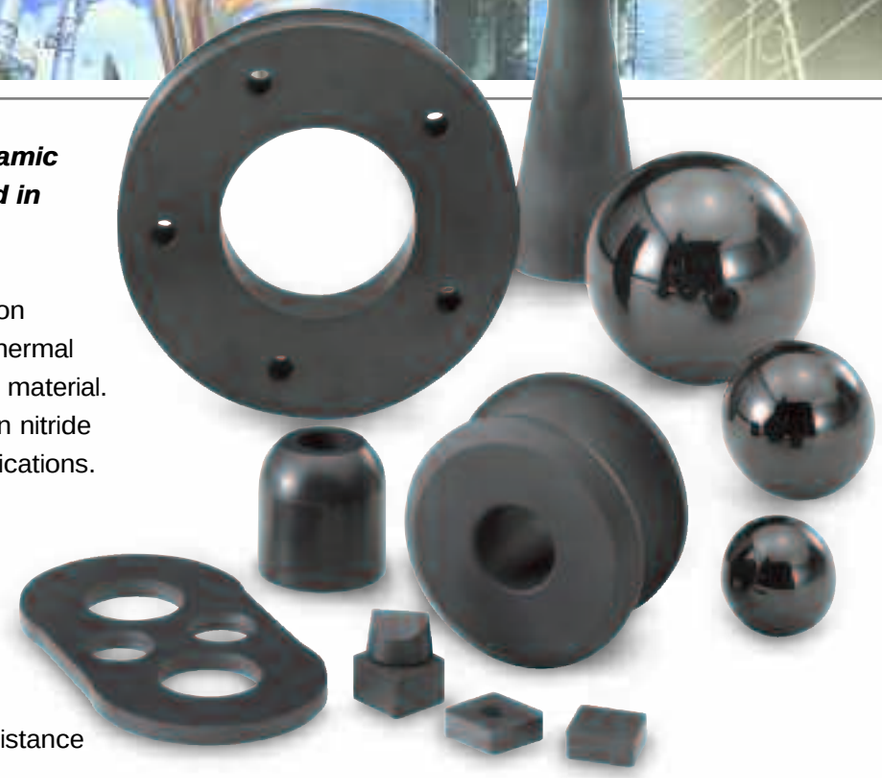
Semiconductor

ceradyne, inc.®

ADVANCED TECHNICAL CERAMICS

Ceradyne's Ceralloy® Silicon Nitride

Silicon Nitride is the leading technical ceramic material for demanding applications found in today's industrial marketplace.



Ceradyne's unique family of Ceralloy® 147 Silicon Nitrides exhibit a combination of mechanical, thermal and electrical properties not found in any other material. This wide range of properties establishes silicon nitride as the preferred material for many diverse applications. These materials exhibit:

- Lightweight
- High Strength Fatigue Resistance
- Superior Thermal Shock Behavior
- Exceptional Wear Resistance
- Low Coefficient of Friction Against Steel
- Excellent High Temperature Oxidation Resistance
- High Chemical Corrosion Resistance

The broad range of properties has allowed silicon nitride to replace stainless steel, super alloys, tungsten carbides and first generation ceramics such as Al_2O_3 and $Zr O_2$ in a multitude of demanding applications.

At Ceradyne manufacturing plants in the U.S. and Germany, Ceralloy® Silicon Nitride components are produced in fully dedicated facilities using patented compositions and processing techniques. The technology utilizes inexpensive, plentiful raw materials and time-tested, high volume ceramic manufacturing processes. This results in cost effective, precision engineered components that consistently receive high performance ratings.

Rigid process controls allow components to be produced to net or near net shape, thereby eliminating or reducing the need for diamond grinding. Components requiring close tolerances can be finish machined in Ceradyne's fully equipped precision diamond grinding facilities. Silicon nitride can be joined to metal components to form assemblies using a wide range of attachment methods.

Ceradyne engineers have proven that silicon nitride works where other materials fail. From aerospace, to automotive engines, to industrial applications, Ceradyne's lightweight, durable heat and erosion resistant Ceralloy® Silicon Nitride is the most versatile, advanced technical ceramic solution worldwide.

Silicon nitride works where other materials fail.

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