

SHINAGAWA

SHINDURAWEAR™ SSiC
Sintered Silicon Carbide

- Sintered silicon carbide is produced from extremely fine, sub-micron, silicon carbide powder and non-oxide sintering additives. This material displays an extremely high corrosion resistance in acidic and basic media, and is maintained up to extremely high temperatures.
- Properties are outstanding among high-temperature ceramics, complemented by high thermal shock resistance, high thermal conductivity, high resistance to wear and a hardness close to that of diamond.
- Ideal for extremely demanding applications. For example, slip ring seals in chemical pumps, bearing bushes, high temperature burner nozzles, or as kiln furniture for very high application temperatures.

Markets that widely use this type of material include, but are not limited to:

* **Mining**
* **Pulp and Paper**
* **Chemical**
* **Petrochemical**
* **Power Generation**

Applications Include:

* **Nozzles**
* **Cyclones**
* **Spigots**
* **Impeller Rings**
* **Apexes**
* **Valves**
* **Suction Pumps**
* **Chutes**
* **Autoclave Parts**
* **Vessel and Pipe Linings**
* **Bearing Seals**
* **Dust Collectors**
* **Cones**

Physical Property	Units	Value
Composition	-	SiC
Grain Size	µm	4-10
Density	g/cc	3.15
Hardness (Knoop)	GPa	2,800
Modulus of Rupture	Mpa	380
Tensile Strength	MPa	250
Compressive Strength	MPa	3,900
Elastic Modulus	GPa	410
Coefficient of Thermal Expansion 20-1,000 °C	1×10^{-6}/°C	4
Thermal Conductivity	W/mK	125
Poisson's Ratio	-	0.16

All of the above statements, recommendations, suggestions and data concerning the subject material are based on laboratory and field results, and although we believe the same to be reliable, we expressly do not represent, warrant or guarantee the accuracy, completeness or reliability of same, of the material, or the result to be obtained from the use thereof. Nor do we warrant that any such use, either alone or in combination with other materials, shall be free of the rightful claim of any third party by way of **INFRINGEMENT** or the like, and **SHINAGAWA SPECIALTY CERAMICS AMERICAS, LLC DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

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