

SCProbond™ TW

Thin-Wall Nitride Bonded Silicon Carbide

Description:

SCProbond™ TW has been formulated at SCP to allow casting of thin-wall parts for customers in the same high quality NBSiC material we are known for. Grain size and binding strength have made casting NBSiC parts with < 0.375" wall thickness a challenge in the past, resulting in low yields and increased cost for thin-wall NBSiC. SCProbond™ TW can be cast in the range of 0.25" to 0.375". This material is characterized by excellent wear properties in severe industrial environments with ASTM C704 results at 1.65cc volume loss, increased flexural strength with MOR results that are double those of our SCProbond™ TN, and the same 1525°C service temperatures that allow for use in extreme heat. Similar to our findings with TN, SCProbond™ TW exhibits a 15% increase in strength with thermal cycling. This material is recommended for use in areas where a wear or corrosion resistant component is needed, but wall thickness is limited, and/or high temperatures areas with similar size constraints.

Physical Properties:

Property	Unit	Value
Density	g/cc	2.71
	lb/ft ³	169.2
Apparent Porosity	%	13-16
C704 Abrasion Loss (volumetric)	cc	1.65
Modulus of Rupture 3 Point Loading	MPa	129.4
	psi	18,769
Maximum Service Temperature (Dependent upon atmosphere)	°C	1525
	°F	2777
C1171 Thermal Cycling	Psi	15% Gain after thermal cycling
Thermal Conductivity	W/m ² K	18
Coefficient of Thermal Expansion @ 1200°C	/° C	4.9 x 10 ⁻⁶
	/° F	2.7 x 10 ⁻⁶



Silicon Carbide Products, LLC
361 Daniel Zenker Drive
Horseheads, New York 14845 USA
Telephone: +1-607-562-8599
Fax: +1-607-562-7585
Email: scp@scprobond.com



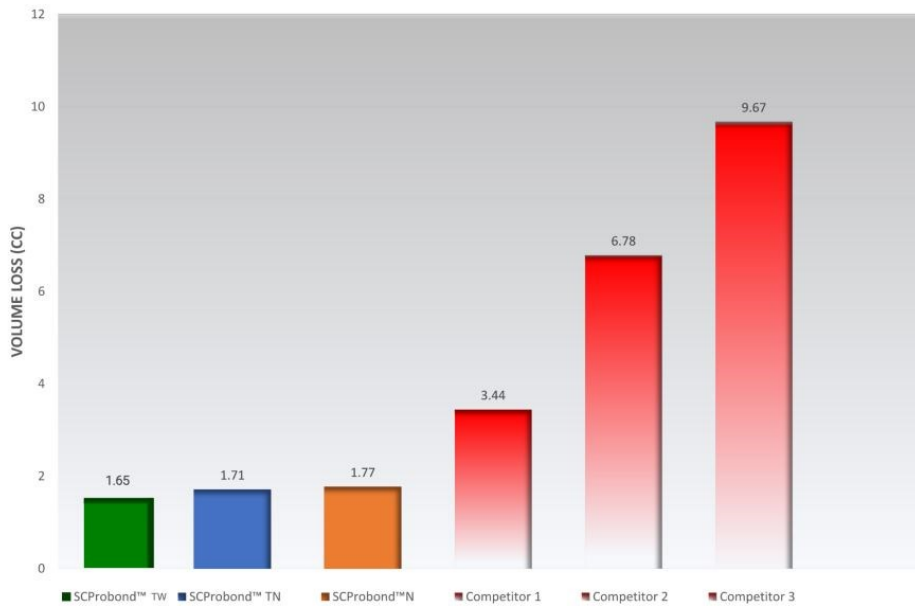
SCProbond™ TW

Thin-Wall Nitride Bonded Silicon Carbide

Suggested Applications

- Induction Coil Liners
- Accelerator Housing Inserts
- Refractory Components / Plates
- Feed Zone Liners
- Thermocouple Protection Tubes
- Molten metal pump protective sleeves
- Kiln Beams / Furniture
- Forge Coil Liners

SCProbond™ TN, TW, & N VS. Competitors
ASTM C704 Test



WARRANTY AND DISCLAIMER

Silicon Carbide Products, LLC gives no warranty, express or implied, and all products are sold upon condition that purchasers will make their own tests to determine the quality and suitability of the product. Silicon Carbide Products, LLC shall be in no way responsible for the proper use and service of the product. The information given in this publication is considered to be accurate and reliable and is provided as a service only. Physical properties shown are typical. Actual properties are dependent on curing conditions and degree of cure. Any information or suggestions given are without warranty of any kind and purchasers are solely responsible for any loss arising from the use of such information or suggestions. No information or suggestions given by us shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.

11/30/2017



Silicon Carbide Products, LLC
361 Daniel Zenker Drive
Horseheads, New York 14845 USA
Telephone: +1-607-562-8599
Fax: +1-607-562-7585
Email: scp@scprobond.com

