

## Composite of boron carbide and silicon carbide: ready-to-press granules for pressureless sintered ceramics

BoroSiC granules are spray dried granules, based on Kymera's green silicon carbide and boron carbide. The premix is doped with sintering additives, temporary binder and pressing aids. It is ready to be pressed into a green body. The product is ideal for uniaxial and isostatic pressing.

**Packaging** 15 kg plastic pails

### Composition

	Sintering additive	Binder content (total organic)	Moisture content	SiC type
	Carbon	%	%	balance
<b>BoroSiC 30/70 P</b>	Resin	approx. 12	approx. 0.5	Green Sintex 13C

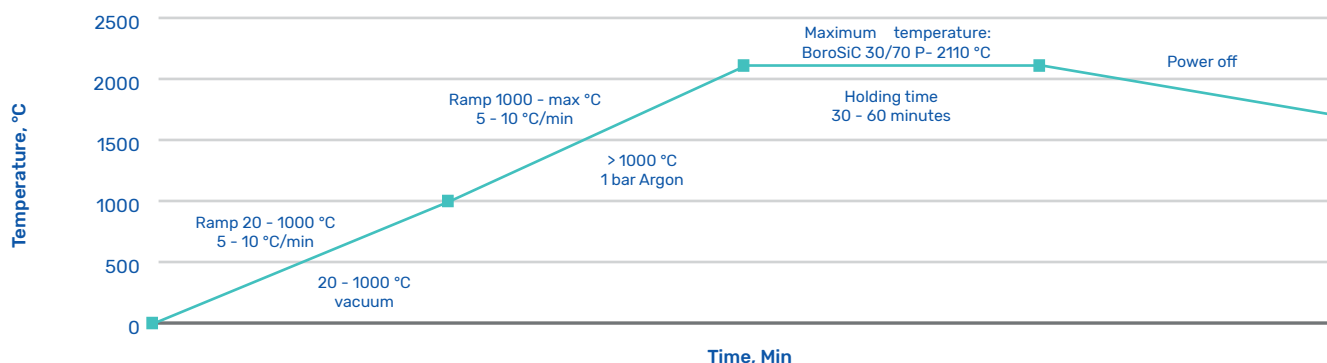
### Typical physical properties

	Granules				Green body				
	Size $\mu\text{m}$	Bulk density $\text{g}/\text{cm}^3$	Hall flow-meter Sec / 25g	Green density 175 MPa	Green strength diametral compression curing 120 C				
					150 MPa	30 min	1 h	2 h	
<b>BoroSiC 30/70 P</b>	max 250 Average 100	0.77	65.5	1.71	0.5 MPa	1 MPa	1.3 MPa	2.3 MPa	

### Typical properties of sintered parts

	Density	Microhardness HV 1000	Indentation fracture toughness, $K_{IC}$	Linear shrinkage	Bending strength
	$\text{g}/\text{cm}^3$	GPa	MPa/m	%	4 point MPa
<b>BoroSiC 30/70 P</b>	2.91 (97% of theoretical)	26	4.0	approx. ~ 17	450

### Typical sintering cycles



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