

Silicon Carbide Ready-To-Press granules for solid-state (SSiC) sintered technical ceramics.

DENSITEC granules are spray dried granules, based on our standard black SINTEX 13C or green SINTEX 15C. The premix is doped with sintering additives, temporary binder and pressing aids and is ready to be pressed into a green body.

DENSITEC 13 is suitable for dry pressing, uniaxial and isostatic.

DENSITEC 15 is particularly suitable for isostatic dry pressing.

Packaging 15 kg plastic pails

Composition

	Sintering additives		Binder content (total organic)	Moisture content	SiC type
	Carbon	Boron	%	%	balance
DENSITEC 13	Carbon black	Boron Carbide	approx. 4.8	approx. 0.6	SINTEX 13 C
DENSITEC 15	Resin	Boron Carbide	approx. 9.5	approx. 0.6	SINTEX 15 C

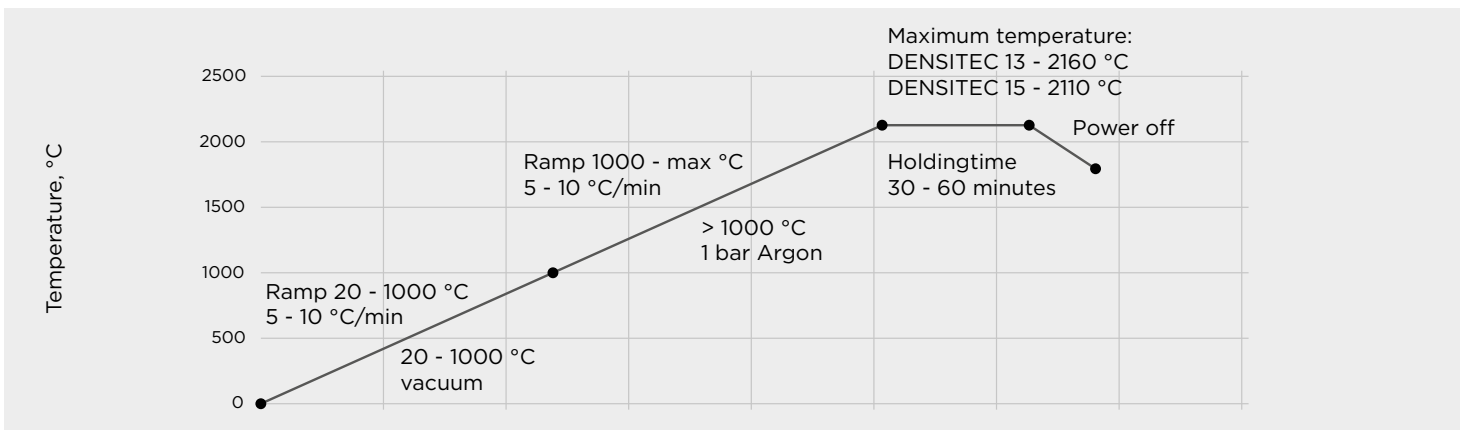
Typical physical properties of green material

	Size		Bulk Density	Flow. Hall	Green density			Green strength Diametral compression			
	max	Average			Sec / 25g	125 MPa	150 MPa	225 MPa	curing 120 C		
			150 MPa	30 min					1 h	2 h	
DENSITEC 13	250	100	0.85	55	1.82	1.85	1.89				
DENSITEC 15	250	100	0.85	45	1.8	1.85	1.88	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
	g/cm ³	GPa	MPa m ^{1/2}	%	4 point MPa
DENSITEC 13	3.14	25	3.5	approx. ~ 16	380
DENSITEC 15	3.17	26	4.0	approx. ~ 18	500

Typical Sintering Cycles



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