

Silicon carbide ready-to-press granules for liquid phase (LP-SiC) sintered technical ceramics.

Densitec-L is used for production of liquid phase sintered SiC and is a spray granulated powder based on our standard black Sintex 13C. The powder is doped with oxides, temporary binders and pressing aids, and is ready to be pressed into a green body.

Packaging 15 kg plastic pails

Composition, approx. weight (dry basis)

SiC type	Al ₂ O ₃	Y ₂ O ₃	Moisture content	Binder content (total organic)
Sintex13C	5.50%	3.50%	1%	6%

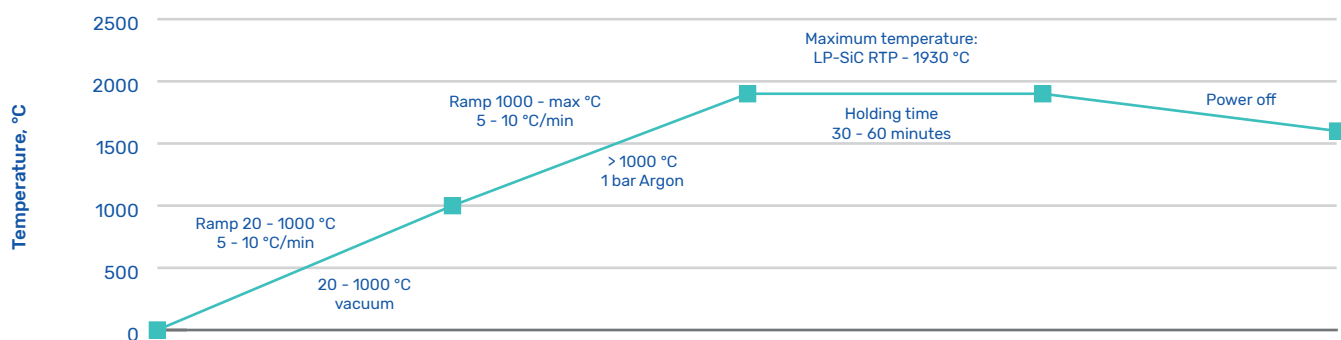
Typical physical properties

Granule size		Bulk density	Hall flowmeter	Green density, axial pressure, incl. organics & moisture		
max	average	g/cm ³	Sec / 25gr.	125 MPa	175 MPa	225 MPa
250 µm	100 µm	0.86	45	1.87 g/cm ³	1.92 g/cm ³	1.95 g/cm ³

Typical properties of sintered parts

Density	Microhardness HV 1000	Indentation fracture toughness, K _{IC}	Linear shrinkage	Bending strength
g/cm ³	GPa	MPa/m	%	4 point MPa
3.21	24	4.5	19	470

Typical Sintering Cycles



Remarks: Properties given have been achieved on a test specimen that has been pressureless sintered without using a powder bed. A recommended sintering cycle is shown on the above curve. It must be emphasized that the cycle is furnace and load dependent.