GNPGraystar
Specialty Materials
AN ISO 9001 CERTIFIED COMPANY

TECHNICAL DATA SHEET

SiCS - 13LP

Ready-to-Press Silicon Carbide Granules for liquid phase (LP-SiC) sintered ceramics.

Typical Composition (approx. weight on dry basis)

Alumina (Al_2O_3)	5.50 %
Yttria (Y_2O_3)	3.50 %
Moisture Content	1 %
Binder Content (Total Organic)	6 %

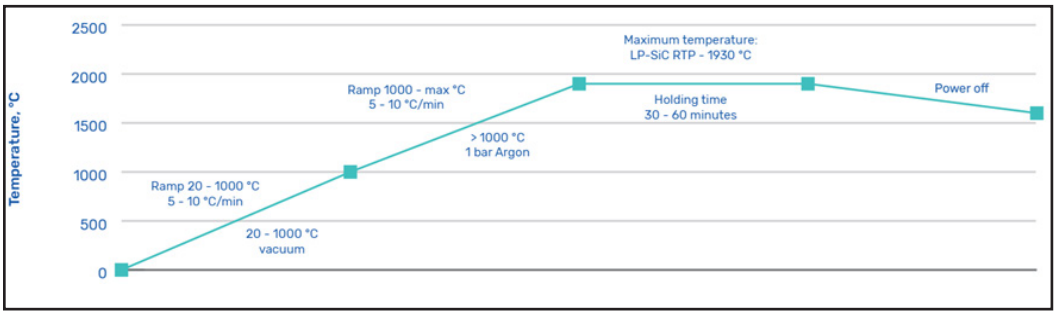
Typical Physical Properties

Granule Size	100 µm (average); 250 µm (maximum)
Bulk Density	0.86 g/cm^3
Hall Flowmeter	45 Sec/25gr
Green Density (axial pressure, incl. organics & moisture)	
125 MPa	1.87 g/cm^3
175 MPa	1.92 g/cm^3
225 MPa	1.95 g/cm^3

Typical Properties of Sintered Parts

Density	3.21 g/cm^3
Microhardness HV 1000	24 GPa
Indentation Fracture Toughness (K_{IC})	4.5 MPa/m
Linear Shrinkage	19 %
Bending Strength (4 Point)	470 MPa

Typical Sintering Cycles



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

Description:

GNPGraystar's SiCS-13LP is a spray granulated powder doped with oxides, temporary binders, and pressing aids. It is ready to be pressed into a green body.

Applications:

GNPGraystar's SiCS-13LP are Silicon Carbide ready-to-press granules for use in liquid phase (LP-SiC) sintered ceramics.

Packaging:

15 kg plastic pails

info@GNPGraystar.com

Rev. 02/2021

Northern Office
37 John Glenn Dr.
Amherst, NY 14228
716.759.6600

www.GNPGraystar.com

Southern Office
9 Simmonsville Rd.
Bluffton, SC 29910
843.815.5600