

<b>Material</b>	<b>Green Alpha Silicon Carbide</b>
Binder System	Acrylic Resin
Carbon System	Starch Base Carbonizing Binder
Application	Simple Uniaxial rings

Product Number:

## IKH 605

### Typical Chemistry Analysis

Chemical	Typical Value
Fe	<0.05%
Al	<0.05%
Ti	<0.02%
Ca	<0.02%
Mg	<0.01%
Na	<0.01%
K	<0.01%

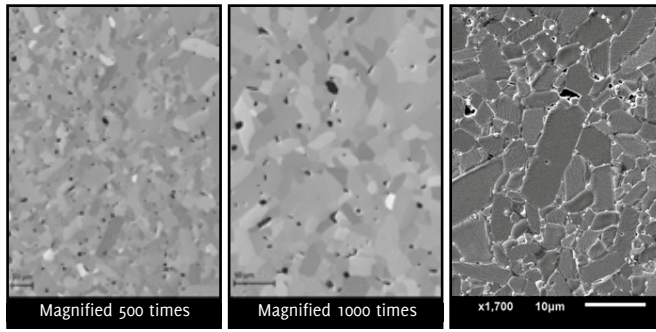
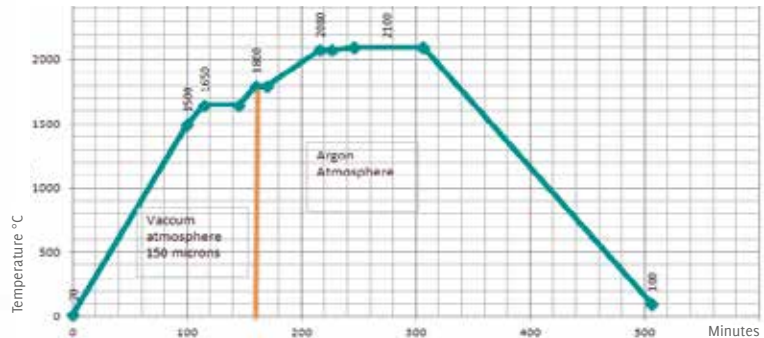
### Typical Powder Characteristics

Chemical	Typical Value
Bulk Density	0,700 Grm/cm <sup>3</sup>
Tap Density	0.830 Grm/cm <sup>3</sup>
Pressed Density @ 1300 Bar ISO	1,7 Grm/cm <sup>3</sup>
Green Strength	1 Mpa
Axial Pressing/Shrinkage @ 1300 kg/cm <sup>2</sup>	1,65 / 1,235
Axial Pressing/Shrinkage @ 1500 kg/cm <sup>2</sup>	1,7 / 1,23
Axial Pressing/Shrinkage @ 1800 kg/cm <sup>2</sup>	1,75 / 1,225



### Sintering Curve

Debinding cycle and other Sintering cycles are available on request.



Micro section sintered part    Micro section sintered part    Micro section sintered part

### Sintered Body Properties

Characteristic	Typical Value
Sintered Density	3,10 Grm/cm <sup>3</sup>
Wt loss	8,5 %
Microstructure	<10 Microns.
Hardness Knoop	2600
Compressive Strength	2500 Mpa
Flexural Strength	400 Mpa
Elastic Modulus	400 Gpa
Thermal Expansion Rt To 400 C	4,5 X10 <sup>-6</sup> m/m/K

### Advantages.

- Excellent powder flowability that reduces the variation filling the die ensuring consistency in green density.
- Reduction of non conforming parts due to dimensional problems after sintering as a result of excellent flowability and pressing behavior.
- Improved binder system to eliminate sticking to die during the compaction. Efficiency in the press is increased due to less down time to clean molding tools.
- RTP formulation contains a carbon precursor environmentally friendly. No use of phenolic resin. Our carbonizing binder makes the coking process clean and safer avoiding toxic emissions to environment and less down time for maintenance in rough vacuum pump.
- Cost reduction in tools worn out due to lower pressures needed.
- High purity Silicon Carbide used as raw material to ensure correct densification and excellent material performance.