IKH 640
B_4C RTP

Grain Size Distribution

d_{10}	< 45 µm
d_{50}	~85 µm
d_{90}	> 160 µm

Chemical Composition

B_4C	87.5 – 89.5 %
binder phase	9.5 – 11.5 %
CaO	< 0.01 %
Fe_2O_3	< 0.18 %
SiO_2	< 1.00 %
Na_2O	< 0.001 %
MgO	< 0.001 %

These properties are typical but do not constitute specifications

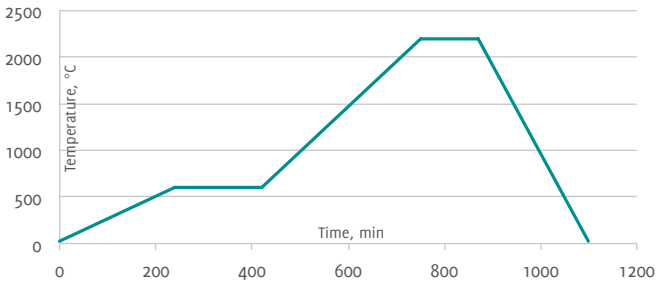
Physical Properties

Green Density [1)]	1.95 g/cm³
Sintered Density [1)]	2.59 g/cm³
Apparent Density	0.78 g/cm³
Flexural Strength (4-point)	~250 MPa
Shrinkage	~17 %
Δm [2)]	~14 – 15 %
Color	grey

1) at 200 MPa 2) weight loss after sintering

Recommended Sintering Conditions

Sintering Temperature	2200 °C
Debinding	600 °C



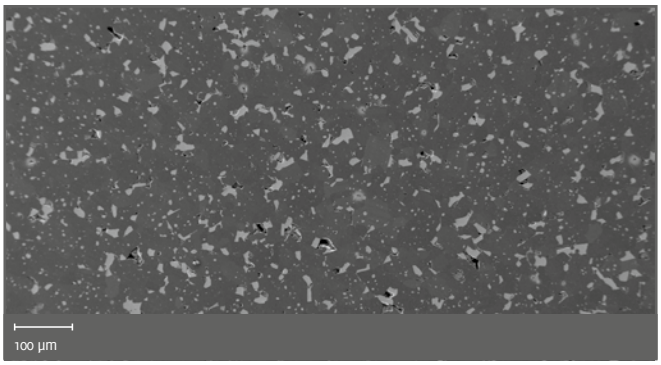
The shown debinding and sintering cycles are exemplary. More information on request.

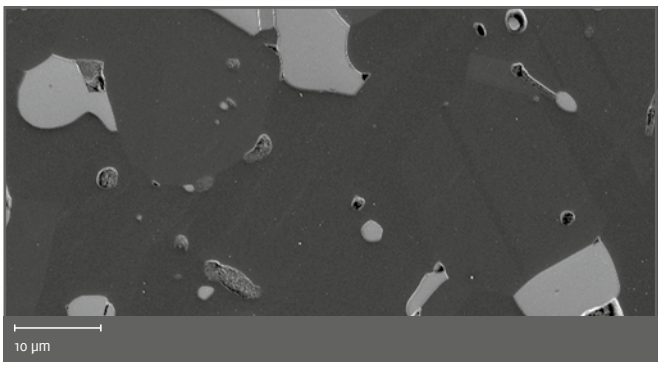
Applications

Milling Tools, Neutron Absorber Material, Ballistic, Nozzles, Cutting Tools, Wear Protection, for Cold Isostatic Pressing, Green Machining, Parts with Complex Geometry

Advantages

- Excellent powder flowability and pressing behavior for low variance of die filling and green density.
- High dimensional accuracy after sintering, low dimensional scrap rate.
- Improved binder system with non-sticking properties on die surface. Reduced down time for mold cleaning.
- Formulation with eco-friendly carbon precursor. No use of phenolic resin. Clean and safe debinding process without toxic emissions. Reduced deposits inside debinding equipment provide for reduced maintenance down time.
- Reduced pressure to obtain the required green density. Reduced cost factor related to tool wear.





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