IKH 631
ZrO_2/Y_2O_3 94/6 RTP

Grain Size Distribution

d_{10}	< 40 µm
d_{50}	~ 60 µm
d_{90}	> 90 µm
Specific Surface Area	–

Chemical Composition

Al_2O_3	< 0.3 %
ZrO_2	~ 94.0 %
Y_2O_3	~ 6.0 %
TiO_2	< 0.1 %<
SiO_2	< 0.1 %<
Na_2O	< 0.1 %<
MgO	< 0.1 %<
HfO_2	< 2.0 %<

These properties are typical but do not constitute specifications

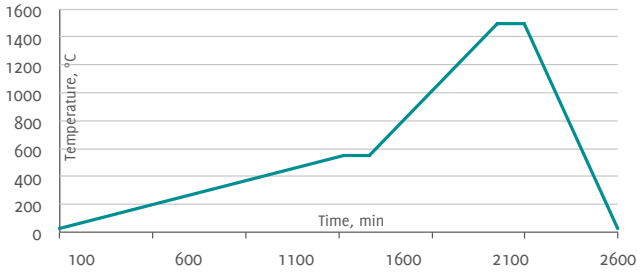
Physical Properties

Green Density [1)]	3.1 g/cm³
Sintered Density [1)]	6.1 g/cm³
Apparent Density	1.39 g/cm³
Flexural Strength	—
Shrinkage	~ 22 %
Δm [2)]	~ 7 %
Color	off white

1) at 200 MPa 2) weight loss after sintering

Recommended Sintering Conditions

Sintering Temperature	1500 °C
Debinding	550 °C



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

Applications

Technical Ceramics, Wear Protection, Isolation Rings, Bearing Bushes

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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