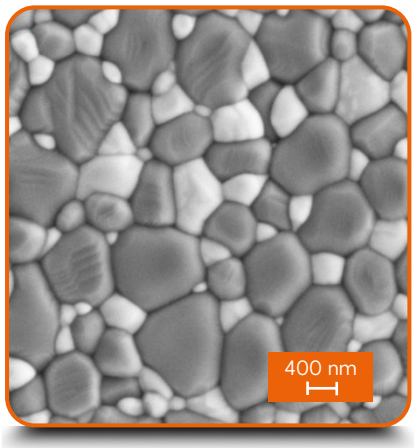
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Material Data Sheet
ZTA80

General Information

Name	ZTA80
Material Group	ZTA Zirconia Toughened Alumina
Description	Ceramic composite material based on a high purity alumina matrix (80%) with zirconia reinforcement



SEM Image: typical microstructure of ZTA80

Properties	Value	Unit
Ratio Al_2O_3 / ZrO_2 (3 mol%Y)	80/20	vol.%
Color	white	-
Density	4,24	g/cm³
Bending Strength (3-Point)	820	MPa
Hardness (HV10)	1595	-
Thermal Conductivity (20°C)	18,4	W/mK
Specific Heat (20°C)	670	J/kgK
Average Grainsize (d50)	570	nm
Typical Chemical Composition (of used powder)		
Al_2O_3	69,5 – 72,5	%
ZrO_2 (+HfO_2)	25,0 – 27,5	%
Y_2O_3	1,0 – 2,0	%
SiO_2	< 0,5	%
Fe_2O_3	< 0,05	%
Na_2O	< 0,1	%

REACH-Information:
This product is not subject to registration requirements under Regulation (EC) No. 1907/2006 (REACH). To the best of our knowledge, it does not contain any Substances of Very High Concern (SVHC) above the threshold of 0.1% by weight.

Disclaimer:
The data and information in this document are based on tests believed to be reliable and are indicative only. They are given to demonstrate typical values of the material but should under no circumstance be considered as a formal commitment. Material proposal is made according to specifications provided by the customer. These are non-binding suggestions on the part of the Sembach company without assumption of any development activity and/or liability. Application and acceptance of these is the sole decision-making authority of the customer. Requirements for the product are to be specified exclusively by the customer, and each customer must conduct its own testing for safety and regulatory evaluations. We point out that the Sembach company does not perform any development activity.

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