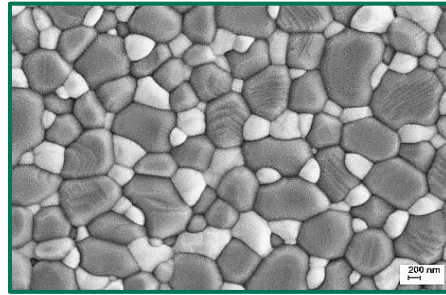


Material Data Sheet

ZTA 80



SEM Image: typical microstructure of ZTA 80

General Information

Name	ZTA 80
Material Group	ZTA / Zirconia Toughened Alumina
Description	Ceramic Composite Material based on a High Purity Alumina Matrix with Zirconia Reinforcement. Derived by Ceramic-Injection-Molding-Process (CIM)

Parameter	Value	Unit
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Physical Properties

Ratio Al_2O_3 / ZrO_2 (3 mol%Y)	80/20	[vol%]
Color	white - ivory (off-white)	
Density	4,24	[g/cm ³]
Bending Strength (3-Point)	820	[MPa]
Thermal Conductivity (20°C)	18,4	[W/mK]
Hardness (HV10)	1595	[]
Average Grainsize (d50)	570	[nm]

Typical Chemical Properties

Chemical Impurities- ICP (used powder)	Ca	≤ 30	ppm
	Cr	≤2	ppm
	Fe	≤10	ppm
	K	≤30	ppm
	Na	≤40	ppm
	Si	≤100	ppm

REACH-Information

The material (ZTA 80) does not contain any SVHC that are forbidden according to the REACH Regulation or any substances that are on the candidate list according to Art. 33 of the REACH Regulation.

Since the ceramic parts produced by Sembach fall into the category of finished manufactured goods, no registration is necessary according to REACH.

This information is based on our knowledge as of the date of this revision.

Sembach GmbH & Co. KG

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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.